



# USAID Kenya - Kenya Dairy Sector Competitiveness Program (October 2011 – September 2012)

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# KENYA DAIRY SECTOR COMPETITIVENESS PROGRAM 623-C-00-08-00020-00

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Prepared for Julius Kilungo  
United States Agency for International Development/Kenya  
C/O American Embassy  
United Nations Avenue, Gigiri  
P.O. Box 629, Village Market 00621  
Nairobi, Kenya

Prepared by  
Land O'Lakes, Inc. | International Development  
1080 West County Road F -MS 5120  
Shoreview, MN 55126 U.S.A.  
+1 ( 651 ) 494-5144 (fax)

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## List of Acronyms

|            |  |
|------------|--|
| BDS        | Business Development Services                            |
| DTA        | Dairy Traders Associations                               |
| DTF        | Dairy Task Force   |
| ESADA      | Eastern and Southern Africa Dairy Association            |
| GMP        | Good Management Practices                                |
| HACCP      | Hazard Analysis and Critical Control Points              |
| ICT        | Information Communication and Technology                 |
| NKCC       | New Kenya Cooperative Creameries                         |
| KDB        | Kenya Dairy Board  |
| KDSC       | Kenya Dairy Sector Competitiveness Program               |
| KENFAP     | Kenya National Federation of Agricultural Producers      |
| KLBO       | Kenya Livestock Breeders Organization                    |
| KSB        | Kenya Stud Book  |
| LOL        | Land O'Lakes, Inc.                                       |
| MBC        | Milk Bulking Center                                      |
| MOLD       | Ministry of Livestock Development                        |
| MOLD (DVS) | Ministry of Livestock, Department of Veterinary Services |
| MSWG       | Milk Shed Working Group                                  |
| PMP        | Performance Management Plan                              |
| SBO        | Smallholder Business Organizations                       |
| SoW        | Scope of Work  |
| SPs        | Service Providers  |
| USAID      | United States Agency for International Development       |

## **I. Executive Summary and Program Highlights**

The Kenya Dairy Sector Competitiveness (KDSC) Program is being implemented over a 5 year period and aims at improving Kenya's dairy industry competitiveness. The program, implemented with the financial and technical support of the United States Agency for International Development (USAID), aims to transform the Kenyan dairy industry into a globally competitive, regional market leader, with the overall goal of increasing smallholder household income from the sale of quality milk. Land O'Lakes is facilitating this transformation, while industry stakeholders are leading it.

The KDSC Program contributes to the USAID Strategic Objective 7.0 on "Increased Rural Household Incomes". The program is also aligned to the Kenya's development agenda and its goal and objectives reflect national and regional priorities, according to industry stakeholders. Under this program, Land O'Lakes, Inc. employs a market driven value chain approach, utilizing a Business Development Services (BDS) methodology. This report describes the operations and progress in the fifth year (October, 2011 – September, 2012) of implementation.

During the year, KDSC implementation team continued to focus on the three components of implementation; to improve the business operating environment - in particular, building capacity of institutions serving the dairy industry and facilitating policy/regulations/acts/standards review to ensure consumer safety and market expansion, especially the export market; to increase operational efficiency of small business organizations in the industry, especially those serving farmers working directly with the program; and to support increased access to business development services by dairy enterprises, including at farm level. Stakeholder recommendations, as identified by program commissioned industry studies, continued to guide the project strategy in the year. Focus continued in addressing sector challenges, constraints and stakeholder concerns in all the milksheds with remarkable results being realized. Being the final year of implementation, efforts were stepped up to put in place sustainable solutions and sustainability measures as an exit strategy. This resulted in mechanisms that will ensure continuity. In this respect, the program has been linking SPs with farmers and tracking how they initiate demand for their services without fully involving the project staff. This has been designed to evaluate the post-project implementation phase and possible adoption of program activities in the future after the exit of the program.

Key program highlights are enumerated below;

### **Qualitative Impact**

- KDSC successfully facilitated the completion and launch of the Dairy Master Plan and the development of the Dairy Farmers Training Manual. These are resources that are intended to enable dairy stakeholders, especially farmers to enhance their competitiveness and address productivity related challenges.
- To counter the frequent price fluctuations faced by dairy farmers' and occasional gluts in milk production, the program decided to venture into generic milk consumption campaigns aimed at promoting the consumption of milk at all levels. During the year, the program undertook three ventures to this effect, including road shows, school

activations and dairy master plan launch. Three consultancy firms were contracted to carry out these activities and the main outputs are discussed in the report.

- In order to continue building the capacity of dairy stakeholders on the BDS methodology, the program sponsored the participation of 8 representatives of federations and 4 MOLD officials in the 6<sup>th</sup> BDS Conference held at Sarova Whitesands Hotel, Mombasa.
- Facilitated the participation of 20 service providers, 24 SBO representatives and the 4 milk shed facilitators in the African Dairy Conference and Exhibition held in Nairobi in April 2012. Through a cost-sharing arrangement, the KDSCP sponsored delegates facilitated their transport, accommodation and meals.

### **Quantitative Impact**

- A total of 79,483 new households joined the program resulting into a total of 327,758 households having benefitted since the beginning of the program. This shows that the program has surpassed its life-line target by 9%. The female members benefiting formed 34% of all beneficiaries.
- Through the outreach efforts, KDSC facilitated capacity building/training of 47,154 dairy farmers in the year. The training forums focused on topics such as feed/fodder production, appropriate feeding regimes, feed conservation and formulation, modern breeding techniques, A.I adoption and milk handling hygiene. This brings the total number of farmers trained to date to 137,588 implying a 90% achievement on the program target. The program further enabled 40,790 new members to access BDS services, inputs, technologies, and management practices during the year under review. The total number of farmers accessing BDS services by the end of this reporting period was 239,778, showing that the project has surpassed its target by 9%.
- The program continued providing information on input supply sources, linking producers with the suppliers, linking businesses/enterprises to financial service providers and helping the SBOs and service providers meet conditions to access credit. With regard to financial service access, 15,767 new beneficiaries were realized during the year, resulting in 58,581 beneficiaries having accessed financial services to date, thus surpassing the program target by 30%.
- The KDSC program continued to provide linkages between service providers and producer organizations. During this period, a total of 142 New SPs were linked with SBOs in the program area resulting in 1024 total SPs benefiting to date against the program target of 500. This tremendous achievement has been possible through the effectiveness of the BDS implementation module.
- From the farm survey conducted, findings reveal a significant increase in milk productivity across all the milk sheds compared to the baseline (6.4L/cow/day) with Kabete milkshed recording the highest with figures, 16.75L/cow/day, followed by Nyeri, 12.61kg/cow/day, and the least being Nakuru (4.81 kg/cow/day). This is attributed to the adoption of improved dairy management practices promoted by KDSCP through training programs. Disaggregation of the survey results by gender revealed interesting observations; milk yields among herds owned by male farmers were not significantly higher than that of female farmers.
- It was further shown that the cost of producing a liter of milk had significantly decreased (USD 0.15 mean) relative to the baseline value (USD 0.17 mean). This is attributed to



increased forage availability and efficient means of production which have reduced the need for and excessive use of purchased concentrates. The increase in milk productivity has also lowered costs per unit as farmers have learned and adopted new and more efficient dairy practices.

- KDSC continued to promote uptake of productivity enhancing technologies. Survey findings revealed a high increase of farmers adopting breeding technologies and practices, mainly the A.I services which had 97.36 per cent of farmers in all the milksheds as adopted compared to the baseline value of 39.9 per cent. This was made possible through the effectiveness of the BDS approach. Disaggregation of technology adopters by gender is discussed in the report. The uptake of ICT also increased remarkably with about 40 per cent of all SBO having installed computers. Some have gone ahead and acquired software to help them manage their accounts.
- The program continued to promote the improvement of the value of dairy cows by encouraging members to register their animals with the Kenya Livestock Breeders Organization (KLBO) and Kenya Stud book. To date, a total of 50 breeders have been trained.
- Survey findings also showed that the gross margin being reported by dairy farmers was Kshs 15.76 (US\$ 0.197), while the cumulative average of the gross margin since the intervention of the program was KShs 10.56 (US\$ 0.132) showing an increase of 88.6 per cent relative to the program's target of 40 per cent. Gross margin increase is attributed to; the increased rate of adoption of effective dairy management technologies that have been promoted by the program; and steady milk prices realized from sale of milk through SBOs with clear marketing structure.
- The program has also realized impressive progress in income levels per household. The income realized from dairy was US\$ 127.74 (Kshs. 10,219.06) per month, with the cumulative average income since the beginning of the program being US\$78.74 (KShs 6,299). This implies a 208 per cent increase against the program target of 80 per cent. This is accounted for by the increase in productivity, reduction in cost of production and increase in average price as a result of project interventions.
- The KDSC program continued to build the capacity of SBOs to ensure they remain sustainable in their operations long after the program exit. In the reporting period, 11 new SBOs were reached culminating in 135 SBOs reached to date. This reflects a 12 per cent success against the program target of 120 SBOs.
- KDSC furthered its efforts of promoting the adoption of environmentally friendly technologies. In this regard, remarkable success has been realized especially with the uptake of fodder crops and trees, and use of biogas digesters. Adoption and use of these fodder trees has reduced farmers' reliance on expensive commercial concentrates thus lowering cost of production. They also ensure sustainable use of soil and water resources. On the energy front, the adoption of biogas is proving to be an efficient alternative. In this period, 187 new biogas plants were installed.
- On gender and youth interventions, KDSCP continued to emphasize gender consideration in different program activities that were being implemented. Detail discussions are in the report.
- On lessons learnt, the organization of farmer groups into business organizations has enabled dairy producers to increase their bargaining power with the processors; Increased capacity building of service providers has resulted in increased sales of their

products; linkages between service providers and farmer cooperatives facilitated by KDSC have enabled farmers to invest in technologies like digital weighing scales, computerization, and biogas equipment at affordable rates.

## **2. Introduction and Objectives**

Land O'Lakes Inc. is implementing the USAID Kenya Dairy Sector Competitiveness (KDSC) program with the financial support of the United States Agency for International Development (USAID). KDSC is a five-year program that aims to improve Kenya's dairy industry competitiveness. Under this program, Land O'Lakes employs a market-driven value chain approach, utilizing a Business Development Services (BDS) methodology. KDSC will help transform the Kenyan dairy industry into a globally competitive, regional market leader, with the overall goal of increasing smallholder household income from the sale of quality milk. Land O'Lakes is facilitating this transformation, while the industry stakeholders are leading it.

The program objectives are three-fold:

- Increase competitiveness of the Kenyan dairy sector through collaboration among sector stakeholders and increased capacity of public sector agencies to serve the needs of the sector;
- Increase marketing of milk meeting quality standards by producer-owned milk bulking/cooling businesses; and
- Enhance access to business development services and technologies.

Besides the core objectives, KDSC addresses key crossing cutting issues of gender sensitivity and environmental sustainability. KDSC takes into account the varying roles, assets, knowledge and skills that men, women and youth bring to dairy farming. The program therefore facilitates the implementation of opportunities for integrating youth and family members into dairy value-chain economic activities.

## **Towards Strategic Objective 7**

KDSC contributes to the USAID Strategic Objective 7.0 on "Increased Rural Household Incomes." The program is implemented through a range of activities grouped into three broad components. The components and the associated deliverables are:

**Component I: Enhanced Capacity for Milk and Production Input Quality Certification and Market Promotion**

Deliverables include:

- Increased smallholder household income
- Increased use of technology
- Improve and enact industry policies and acts that enhance competitiveness

- Develop and implement/enforce quality certification frameworks and work towards a graded payment system
- Dairy enterprises achieve national/international certifications and enforcing quality regulations on suppliers
- Increase feed marketed under new quality standards

## Component 2: Dairy Smallholder Business Organization (SBO) Development

The key deliverables are:

- Producer organizations strengthened
- Increased number of milk bulking centres (MBC) with Hazard Analysis and Critical Control Points (HACCP) and /or SBOs with national certifications
- Increased raw milk sales by SBOs under agreements that pay premium for quality
- Increased gross revenue of milk bulking/cooling businesses from sale of inputs and services other than milk
- Increased number of SBOs transformed into sustainable businesses entities
- Increased number of cooling units installed/rehabilitated by SBOs

## Component 3: Availability of Dairy Business Development Services

Key outcomes/ impacts will include:

- Enhanced range of business services to producers
- Increased value of services/inputs provided by business service providers
- Increased number of smallholders purchasing private sector services at full commercial rates
- New technologies or management practices made available for transfer
- Increased number of dairy farmers receiving loans from financial service providers
- Increased number of smallholders engaged in new, diversified dairy-related enterprises
- Increased number of dairy farmers receiving short-term training

## Implementation Strategy and Key Activities

KDSC is implemented using innovative, international best practice approaches and methodologies that ensure achievement of expected results and sustainability of impacts long after the end of the program. Using local service providers and facilitators, Land O'Lakes, the implementing agency, supports market-based services/solutions, and action-oriented policy research to overcome both industry-level and enterprise-level constraints to competitiveness at key points along the dairy value chain. Industry stakeholders have since been engaged to been engaged to identify competitiveness constraints, and propose solutions to these constraints.

### **3. Program Implementation**

In the period under review, the KDSCP continued with its core mandate of addressing dairy sector challenges, constraints and stakeholder concerns, in all the milksheds it has worked in for the past four years. The program also expanded its boundaries to include regions outside the core milkshed areas. This was in conformity with the new USAID Kenya focus on the Feed the Future regions. Though KDSCP design and implementation was not done with FtF regions in mind, it happened that some of the regions that the program was working in would later be included as FtF regions. In implementing the program, significant achievements have been realized in the year. Program efforts in the year mainly focused on putting in place structures that would ensure sustainability beyond the program, considering that KDSC is in its final year of implementation. Efforts were stepped up to link more service providers to farmers and farmer groups with the aim of ensuring sustained demand for various services after the program ends.

KDSC has also been focusing attention on ensuring strong policy and regulatory frameworks for the dairy sector are put in place, laying strong institutional foundations especially for the institutions that were created during the tenure of the program, stimulating demand for dairy products through promotional campaigns and promoting efficiency and effectiveness of the dairy value chain. The latter done through market promotion activities. To ensure the sector remains competitive in the long run, the program continued to address initiatives that improve industry standards and consumer safety. To address producer challenges like marketing, the program continued to sensitize producers and their groups to explore multiple marketing channels for their milk, like the DTA. This was seen as a price stabilization strategy. The program also explored ways of working with DTA to build the capacity of cooperatives on milk handling and hygiene, to ensure consumer safety. DTA has been very supportive to the dairy sector and has been able to carry out training on milk quality in all the milksheds in the country. Additionally, the program continued to liaise with other stakeholders in the milk marketing industry to create avenues for the producers to sell their milk. The program promoted the sale of milk through use of dispensers

Environmental conservation and gender and youth remained critical cross-cutting issues that the program continued to emphasize on. With regard to the environment, KDSC continues to sensitize its partners, producer groups and service providers, to engage in activities that are less disastrous to the environment. This initiative seems to have borne fruits, with majority of the producer groups reporting one or two interventions they are engaged in that contributes to environmental protection. Likewise, most groups working with the program have made it a habit to be sensitive to gender issues within their operational structures, with women gaining more leadership roles in the groups. Much discussion on the gender and youth are enumerated in the report. Detailed activities and achievements in the reporting period are summarized below and are organized by program component. As mentioned earlier, the interventions under KDSCP are grouped into three broad areas/components, namely initiatives to for enhancing quality of inputs and products, including policy and standards review and advocacy activities; Dairy smallholder business organization development and farm-level productivity activities; and activities that aim to increase dairy business development services.

### **3.1 Component One: Enhance Capacity for Milk Production Input, Quality Certification, and Market Promotion**

In the reporting period, KDSC continued its efforts of capacity building for milk producers. Focus was mainly on exploration of alternative marketing channels that would improve the uptake of their milk. This was mainly occasioned by a reduction in milk purchase by some of the processors and the volatile prices offered by processors. A general observation was that members of the DTA provided an important alternative market, offering better prices at times when most processors had reduced producer prices. There were clear price differentiations across all the milksheds with average prices offered being between KES 33-40 (USD 0.41-0.50) per litre. Prices offered by processors were also dependant on the quantity of milk a SBO could bulk with those bulking larger quantities enjoying higher prices.

KDSCP also continued to sensitize the farmers on the need to register their livestock and conduct milk recording. With new requirements by KLBO to have all inspectors register with Breeder Societies before being allowed to register animals as well as standardization of charges, the animal registration process was intensified. The process ran concurrently with training and tagging in all the milksheds. To this date, 50 breed inspectors have been trained.

Detailed activities for the reporting period under this component include;

#### ***3.1.1 Completion of Dairy Farmers Training Manual***

The program successfully completed the development of the Dairy Farmers Training Manual. The manual targets smallholder dairy farmers and key stakeholders in the dairy sub-sector in the country. The manual is expected to help smallholder dairy farmers in their day to day management activities so that they can not only produce milk efficiently for higher returns but also in a clean environment and also sustainably. The dairy sub-sector is a major employer particularly in the rural and peri-urban areas. Improved production is expected therefore to increase employment opportunities and contribute directly to poverty reduction and improved family or household income. The manual is available in the KDSCP website <http://www.kdairyscp.co.ke/>.

#### ***3.1.2 Generic milk consumption campaign***

The constant reduction in the prices of milk by processors has affected production efforts with farmers becoming reluctant to intensify production. To counter this negative effect, the program embarked on activities aimed at mopping up milk produced at the farmer level. In this regard, the program ventured into milk generic consumption campaign aimed at promoting the consumption of milk at all levels. This event was organized in partnership with the Kenya Dairy Processors Association (KDPA), Kenya Dairy Board (KDB), dairy cooperatives and the Dairy Traders Association (DTA). The event had three major components including Road shows, school milk activation and dairy master plan launch. The program engaged the following consultancy firms to carry out different activities;

- i. EXP Momentum Ltd - Indoor Stakeholders Launch, Road shows in Mombasa and Kisumu, and 4 regional launches for the master plan
- ii. MoSound Ltd - Nairobi based road shows and groove tours
- iii. Inter Management Group - Outdoor Launch in Nairobi, Street and Supermarket activations and HORECA storms
- iv. Regional Development Consultants - School Activations

*Launch of the Generic Milk Consumption Campaign:* This component was successfully rolled out with the main theme of 'Stay Young Do Milk'. The objective was to popularize consumption of milk and generic dairy products in the country. The campaign has been on-going since June 2012 and runs through billboards and TV and Radio stations adverts.

*Campaigns in the Groove Award Shows;* Milk Consumption promotional activities were undertaken by Mo Sound through its organized Groove Awards shows in the country. Groove Awards concerts were organized in Eldoret, Thika, Meru, Mombasa and Nairobi, and carried messages that touch on the benefits of milk consumption. The different Gospel Artists who performed in these events sensitized the crowds about the importance of consuming milk and other dairy products due to their high nutritional values.



**Dairy products being distributed to part of the crowd that attended the Groove Awards show**

*Outdoor events and street activation campaigns;* Inter Management Group Ltd held outdoor events and street activation campaigns for the generic dairy consumption campaigns in Nairobi.

### **3.1.3 Revival of the Kericho Agricultural Show**

This activity is seen as one of the key successes of the program interventions in Kericho Milkshed. Working through the Milkshed Working Group (MSWG), the Kericho Agricultural Show which had remained dormant for the last two decades sprang back to life. The South Rift Livestock Breeders' Forum (SRLBF) in collaboration with New KCC, KDSCP, Ministry of Livestock Development, Financial institutions, Feeds companies, and other stakeholders managed to hold a historic livestock exhibition event in March 2012. The Exhibition which had a mini breeders' show as the major component was the first step in reviving the agricultural show in the region. The Exhibition was attended by over 2,760 farmers with 20 exhibitors participating. The program used the show to train farmers on dairy animal management with the aim of improving their income from dairy enterprise. It is expected that this event will now become an annual event.

### 3.1.4 Eastern and Southern African Dairy Association (ESADA) Conference

The African Dairy Conference and Exhibition is an annual event held in different ESADA chapters. The event is the largest convergence of dairy sector practitioners and stakeholders across the value chain in Africa. This year's event (the 8<sup>th</sup> African Dairy Conference and Exhibition) was held at the Kenyatta International Conference Center, Nairobi on 24<sup>th</sup> - 27<sup>th</sup> April 2012. The three day event showcased the most recent development in the dairy technology in the world. Conference sessions run concurrently with the exhibition.



**One of the KDSCP supported exhibitors at the conference**

KDSCP facilitated participation of 18 small-scale dairy businesses that have been working with the program. 32 individuals involved in the dairy sectors being leaders of dairy cooperatives and milk shed facilitators were also facilitated to attend the event. The beneficiaries of this support had made a request through the Eastern and Southern African Dairy Association (ESADA) to the KDSCP to facilitate their participation by way of paying for the exhibition space in case of the small-scale business and payment of registration fee for the dairy cooperative leaders and milk shed facilitators.

Below is a tabulation of the exhibitors and delegates supported by KDSCP and their remarks with regard to their participation.

**Table 1: Exhibitors supported by KDSCP**

|   | Company                   | Remarks   |
|---|---------------------------|---|
| 1 | Happy Cow                 | The event was very well organized and we managed to offer sampling experience to over 150 customers.<br>We were able to meet potential distributors from Uganda, Rwanda and Tanzania  |
| 2 | Eldoville Farm            | Eldoville farm managed to meet possible distributors from Rwanda, Tanzania and Uganda.<br>We also met possible distributors from other towns in Kenya<br>We meet possible suppliers of milk (small scale farmers)   |
| 3 | Meru Central Farmers Coop | We were able to showcase our products to over 300 visitors to our stand and make a good amount of sales for the three days.<br>We hope that the next event will be in the Kenya and invite more consumers   |
| 4 | Limuru Milk Processors    | A great opportunity where we met possible distributors of some of our products especially ghee.<br>We also had an opportunity to meet customers outside of Nairobi.<br>We made quite good sales of our products at the venue  |
| 5 | Nakuru Simba Machinery    | It was a great opportunity to showcase out machinery to the region.<br>We sold out all the machinery we had brought by the second day.<br>We also had order to supply Rwanda and Uganda<br>In total we sold 5 machines and got order of 7 more machines from Rwanda and 9 machines to Unganda.<br>We also had opportunity to meet possible local farmers who met us for the first time and they were impressed by our machinery |

|    |                              |  |
|----|------------------------------|--|
|    |                              | We hope that next year the event will be in any East African Country.  |
| 6  | Sunever Agroitech Ltd        | We met a lot of potential customers.<br>We got a potential order to supply one complete system worth Kshs. 350,000 in Tanzania for the use by processors.<br>We sold two electronic weighing machines but more importantly we met a lot of potential customers from the region |
| 7  | World Bicycle Relief         | An opportunity to showcase our high quality bicycles to players in the dairy industry.<br>We got enquiries and we shall be following up with some of the cooperatives who indicated that they can support their farmers to procure them  |
| 8  | Raka Cheese                  | A great opportunity to sample our cheese to consumers.<br>We got very impressive feedback from consumers.<br>We also got interests from consumers across the region  |
| 9  | Maccern Refrigeration        | We met possible collaborators from the region.<br>We were also able to meet potential clients who we can offer our services.<br>We shall be following up with two processors who indicated that they need our services   |
| 10 | Sigma Feeds                  | Sigma foods had an opportunity to meet possible distributors from Tanzania, Rwanda and Burundi.<br>We were also able to meet local farmers and cooperative leaders for possible collaboration  |
| 11 | Zimmerand Dairy Products Ltd | It was an ideal opportunity for Zimmerand to showcase our products from goat milk<br>Local as well as international potential consumers were able to sample our products.<br>We also made sales at the event   |
| 12 | Takamoto Biogas              | We were able to meet possible collaborators from the region  |
| 13 | Browns Cheese Ltd            | We made exemplary showcase of our international standard cheese for possible distribution partnership particularly in the East Africa market<br>We managed to start off discussion for possible distribution partnership with stockists in Tanzania.                           |
| 15 | GMP Services Ltd             | A very good platform to promote our services to the dairy industry.<br>The event was a huge success for us to meet most dairy players who are current and potential consumers of our services  |
| 15 | Peak Feeds Ltd               | We met and made sales to local dairy farmers and met cooperatives leaders for possible partnership   |
| 16 | Lari Dairy                   | A very good opportunity to promote our products in the regional market.  |
| 17 | Shawa Stores                 | Met the local farmers and made goods sales   |

### **3.1.5 Launch of the Dairy Master Plan**

The program continued efforts to promote policy dialogue and advocacy efforts. In this period, a key achievement was the finalization and launch of the Dairy Master Plan, developed by the Ministry of Livestock through the program's support. The Master Plan will act as an action plan guide to dairy sector stakeholders including dairy farmers, milk processors, input and service providers, retailers, planners and policy makers. The Master Plan proposes action plans necessary for the transformation, policy changes and development strategies needed to further steer dairy development in line with the other national development aspirations. The program



plans to facilitate the production of copies of the Master Plan to be distributed to all the 47 Counties in the country. This presents a key milestone on the program's contribution towards ensuring a competitive dairy sector. Together with the farmers' manual, the two documents are expected to play a critical role in improving the quality of milk produced to the market and also lowering the volumes of milk rejected due to quality concerns. The end result will be increased farm incomes. The Master Plan is downloadable from the KDSCP website (<http://www.kdairyscp.co.ke/>).

### **3.1.6 Kenya National School Milk Program Development**

During the period under review, the program was able to finalize on the school milk program report. The report on the Kenya School Milk Program was developed in collaboration with various institutions, individuals and organizations with the guidance of ESADA, KDB, the School Milk Committee and KDSCP, with KDSCP being the main sponsor of the initiative. The report covers the following key areas;

- A review of the current school milk program and outline the strengths and weakness of the program.
- Lessons learnt for the expansion of the program and for helping create a milk drinking culture.
- Gives an expanded phase of the school milk program which aims to Increase the number of participating schools and Increase the number of processors participating in the program.
- Identification of areas where other players can participate.
- How to develop sustainable models for implementing the school milk program in Kenya

### **3.1.7 Facilitated capacity building efforts of its partners**

The program continues to undertake capacity building initiatives to various players/partners so as to enhance their operational skills and hence growth of the sector. In the reporting period, the program continued to work with the Kenya Livestock Breeders organization (KLBO) in improving its capacity to discharge its mandates. A total of 50 breed inspectors have been successfully trained to date. Kericho milkshed which had no livestock breeders currently has 19 breed inspectors and they have been able to register 350 animals in the reporting period. The successful breeders show organized in the milkshed played a key role in bringing about this transformation.

### **3.1.8 Facilitation of the National Dairy Task Force (DTF) and the Milk shed Working Groups (MSWG) meetings.**

Program efforts continued to foster key interactions between the different sector players with the aim of ensuring the sub-sector remains as competitive as possible. In the reporting period, the program convened the DTF to discuss pertinent issues relating to the sector. Key issues that were discussed during the DTF meetings were the finalization of the School milk study and completion of the farmers training manual. The later has since been finalized and a copy uploaded in the KDSC website (<http://www.kdairyscp.co.ke/>). The training manual has elicited huge demand from farmers who are eager to consume its contents. The program

further facilitated the meetings of the MSWGs across all the milksheds. These meetings address key industry issues and are used by the program to rally stakeholders to support and invest in initiatives that spur industry growth. The meetings continue to spur non-USA investments in the industry in form of non-program resources leveraged. In the reporting period, the program was able to leverage an estimated **US\$ 2.2 million** in non-project resources through collaborations with other industry players. This was achieved through stakeholder contributions to sector initiatives – both in-kind and monetary-wise. A notable event that KDSC was instrumental in was the revival of the Kericho Agricultural Show that has remained dormant for nearly 20 years, courtesy of the Kericho milkshed working group. New KCC were the main sponsors of the Exhibition at an estimated cost of **US\$ 23,000**. The program intends to use the show to empower the farmers on dairy animal management with aim of improving their income from dairy enterprise. The Trans Nzoia MSWG also organized the KLPA exhibition in Kitale which was attended by over 10,000 farmers and over 50 exhibitors drawn from across the milkshed. The event was dubbed a great success and farmers even requested the MSWG committee to be holding the exhibition annually and also to include cattle parading in the event.

### **3.1.9 Agribusiness Expo 2012 in Nakuru**

The program participated in the Agribusiness Expo 2012 in Nakuru organized by the East African Grain Council (EAGC) where 500 farmers visited the KDSCP stand. Farmers who visited KDSC stand expressed interest on training materials and the Dairy Farmers Manual which KDSCP through USAID support had supported the Ministry of Livestock to develop. KDSC stand hosted other service providers who've been working with the program including, Nakuru Simba Machineries, Kengap Publishers (selling horticultural crop manuals), Livestock Genetic Society of East Africa, a Milk Dispensing Company and Takamoto Biogas.



**Ms Mary Munene of KDSCP attending to the Chairman of the Parliamentary Committee on Agriculture, Hon. John Mututho during his visit to KDSCP stand**

### **3.1.10 Facilitated the training of Processors on Quality Management Systems**

During the reporting period, KDSCP contracted Food Safety International (FSI) to conduct training on ISO 22000:2005 for Happy Cow Ltd staff and guide them in the documentation process for the same. ISO 22000:2005 is an international standard for Food Safety Management System established to assist players in the food chain to improve on the management of food safety in their operations. Happy Cow Ltd is a dairy processing company specializing in cheese processing, yoghurt and mala, and its minor productions include fresh milk and cream. If properly implemented, ISO 22000:2005 Food Safety Management System will enable HCL to maintain and exceed compliance with legislative and regulatory requirements, assure food safety

through implementation of preventative and control measures for food safety risks, be able to manage emergency situations and deal with non-conforming products and continually improve on their food safety management system. The assignment was completed satisfactorily and HCL is supposed to move to the next level of certification of the system. At the same time, the program facilitated training activities for the NKCC on ISO 9001:2008 QMS that was conducted by Kenya Bureau of Standards (KEBS). All departments in NKCC are now in the process of implementation. The program facilitated training of a total of 220 NKCC staff.



**Ms. Mary Munene of KDSCP and Mr. Matu Wamae, Chairman, NKCC receiving the training manual and ISO certificate from KEBS**

### **3.2 Component Two: Develop Dairy Smallholder Business Organizations**

KDSC continues to promote dairy management activities that contribute to competitiveness in the industry. Due to program impacts in changing livelihoods, an increase in membership to SBOs has been reported. Program interventions have cumulatively benefitted 135 SBOs, surpassing the cumulative program target of 120 SBOs by end of the program. Due to the benefits gained by members of the SBOs working with the program, especially benefits related to attraction of good milk prices and access to embedded services, membership continues to grow. An additional 79,483 rural households benefited from program activities in the reporting period. This now takes the total number of rural households benefiting to 327,758, surpassing the program target by 9 per cent, out of which 34 per cent are female beneficiaries.

#### **3.2.1 Milk uptake**

Overall, the volumes of milk sold in the reporting period went up relative to the previous period, with a total of **170,099,455 litres** being sold, which averaged **14,174,955 litres** every month. This improved production was mainly attributed to increased investment by smallholder farmers who now have reliable outlets for their milk and increased productivity of milk (Table 2). The weather was also moderate in most of the milksheds which also bolstered production. Besides, the loyalty of members in various SBO ensured a consistent growth in the milk supply. The program embarked on rigorous campaigns to sensitize people on the importance of consuming milk and milk products and this is expected to maintain the production figures on an upward trend as demand increases. Table 2 shows the mean and median milk yield in liters per cow per day disaggregated by gender, age and milkshed. There was a significant increase in milk productivity across all the milksheds except in Nakuru which was still operating below the baseline (6.4 L/cow/day) and Kericho which was slightly above the baseline. The increase may be attributed to individual farmer initiatives and participation in the activities of the KDSCP program. Many farmers have benefited from improved dairy management practices from trainings conducted by milk shed facilitators leading to increased milk production. The highest

yields were recorded in Kabete (16.75L/cow/day), followed by Nyeri (12.61L/cow/day) with the least being Nakuru (4.81 L/cow/day) and Kericho (7.61 L/cow/day).

**Table 2: Mean and Median Milk Yield in liters per cow per day disaggregated by gender, age and milk shed as per the 2012 survey**

| Baseline – August, 2008  | 6.4                   | Mean Yield per cow per day | Median Yield per cow per day | % farmers realizing more than 10.14litres/cow per day | % above target of 15 litres/cow /per day |
|--------------------------|-----------------------|----------------------------|------------------------------|---|--|
| Whole sample             |                       | 10.14                      | 9.0                          | 39.5  | 25.35                                    |
| Sex of Head of household | Male                  | 10.22                      | 9.0                          | 77.0  | 49.27                                    |
|                          | Female                | 9.02                       | 7.0                          | 53.13   | 42.19                                    |
| Gender Age               | Youth                 | 11.13                      | 9.5                          | 43.75   | 31.25                                    |
|                          | Above 30 years of age | 10.07                      | 8.5                          | 39.08   | 25                                       |
| Milk shed                | Lessos                | 10.29                      | 8.0                          | 42.5  | 24.64                                    |
|                          | Trans-Nzoia           | 8.64                       | 8.0                          | 30.21   | 18.75                                    |
|                          | Nyeri                 | 12.61                      | 12                           | 60.0  | 35.0                                     |
|                          | Nakuru                | 4.81                       | 4.0                          | 4.21  | 1.05                                     |
|                          | Gatanga               | 9.06                       | 9.0                          | 38.33   | 20.0                                     |
|                          | Kabete                | 16.75                      | 16.0                         | 75.36   | 66.67                                    |
|                          | Kericho               | 7.16                       | 7.0                          | 14.28   | 5.36                                     |
|                          | Kinangop              | 11.85                      | 10.0                         | 47.22   | 33.33                                    |

Table 3 shows the gross margin reported during the farm survey. The gross margin reported by dairy farmers was Kshs 15.76 (US\$ 0.197). Since the inception of the project, the cumulative average of the gross margin since the intervention of the program was KShs 10.56 (US\$ 0.132). This shows an increase of 88.6% compared to baseline value. It therefore shows that the program target of 40% has been achieved. The increase in gross margin has been realized by the increased in adoption rate by members to the cost reduction technologies promoted by the program. It also benefitted from steady milk price realized through sale of milk through SBOs with clear marketing structure.

**Table 3: Gross Margins and cumulative program figures in US\$/Liter**

| Respondent category    | 2010 wet season      | 2011 wet season      | 2012 wet season      | Cumulative moving average |
|------------------------|----------------------|----------------------|----------------------|---------------------------|
| Baseline – August 2008 | KShs5.80 (US\$ 0.07) | KShs5.80 (US\$ 0.07) | KShs5.80 (US\$ 0.07) | KShs5.80 (US\$ 0.07)      |
| <b>Whole sample</b>    | 0.094                | 0.105                | <b>0.197</b>         | <b>0.132</b>              |
| Sex                    |                      |                      |                      |                           |
| Male                   | 0.096                | 0.109                | 0.181                |                           |
| Female                 | 0.094                | 0.091                | 0.234                |                           |
| <b>Age of farmer</b>   |                      |                      |                      |                           |
| Youth                  | 0.120                | 0.073                | 0.262                |                           |
| Above 30 years         | 0.093                | 0.104                | 0.189                |                           |

|                 |       |       |       |  |
|-----------------|-------|-------|-------|--|
| of age          |       |       |       |  |
| <b>Milkshed</b> |       |       |       |  |
| Nyeri           | 0.060 | 0.143 | 0.107 |  |
| Gatanga         | 0.056 | 0.095 | 0.139 |  |
| Kabete          | 0.133 | 0.164 | 0.269 |  |
| Lessos          | 0.153 | 0.133 | 0.180 |  |
| TransNzoia      | 0.121 | 0.105 | 0.142 |  |
| Kericho         | 0.050 | 0.123 | 0.265 |  |
| Nakuru          | 0.078 | 0.043 | 0.210 |  |
| Kinangop        | 0.104 | 0.088 | 0.184 |  |

During the period under review, the program has also made impressive progress in income levels per household. These can be attributed to improved access to feeds by dairy farmers, adoption of dairy technologies like conservation of fodder crops as well as enhanced training of beneficiaries on dairy management technologies. As reported in Table 4, the income realized from dairy was US\$ 127.74 (KShs. 10,219.06) per month. It therefore shows that the cumulative average income since the beginning of the project by the end of the quarter under review was US\$78.74 (KShs 6,299) showing an increase of 208% compared to baseline value and this has surpassed the target of 80%. The increase can be attributed to the increase in productivity, reduction in cost of production and increase in average price as a result of project interventions.

**Table 4: Household income and cumulative program figures (US\$/Month)**

| <b>Respondent category</b> | <b>2010 wet season</b>  | <b>2011 wet season</b>  | <b>2012 wet season</b>  | <b>Cumulative moving average</b> |
|----------------------------|-------------------------|-------------------------|-------------------------|----------------------------------|
| Baseline – August 2008     | <b>25.54 (KShs2043)</b> | <b>25.54 (KShs2043)</b> | <b>25.54 (KShs2043)</b> | <b>25.54 (KShs2043)</b>          |
| <b>Whole sample</b>        | 63.68                   | 62.91                   | <b>127.74</b>           | <b>78.74</b>                     |
| <b>Sex</b>                 |                         |                         |                         |                                  |
| Male                       | 67.14                   | 65.51                   | 133.64                  |                                  |
| Female                     | 51.84                   | 52.52                   | 108.63                  |                                  |
| <b>Age of farmer</b>       |                         |                         |                         |                                  |
| Youth                      | 61.35                   | 19.13                   | 60.38                   |                                  |
| Above 30 years of age      | 63.75                   |                         |                         |                                  |
| <b>Milkshed</b>            |                         |                         |                         |                                  |
| Nyeri                      | 26.28                   | 65.81                   | 102.98                  |                                  |
| Gatanga                    | 32.12                   | 22.30                   | 71.60                   |                                  |
| Kabete                     | 77.43                   | 153.92                  | 199.76                  |                                  |
| Lessos                     | 123.03                  | 55.99                   | 171.30                  |                                  |
| TransNzoia                 | 77.14                   | 33.99                   | 73.67                   |                                  |
| Kericho                    | 41.98                   | 40.80                   | 69.38                   |                                  |
| Nakuru                     | 74.29                   | 33.90                   | 167.93                  |                                  |
| Kinangop                   | 58.64                   | 72.76                   | 133.26                  |                                  |

### **3.2.2 Capacity building efforts**

Concerted efforts continued to be directed on training dairy farmers in the operational zones to equip them with necessary technical skills to increase herd productivity and incomes. The training forums, organized in collaboration with key stakeholders such as private service providers, Ministry of Livestock extension personnel, and the Kenya Dairy Board covered diverse topics such as feed/fodder production, appropriate feeding regimes, feed conservation and formulation, modern breeding techniques and milk handling hygiene. A key emphasis area is on-farm demonstration on feed conservation techniques to enable smallholders conserve feed in the wet seasons when there is abundance of feeds, and use them during the dry periods of the year. During this reporting period, the program facilitated the training of about 47,154 farmers, resulting in a total of 137,588 farmers having been trained to date. The trainings are usually carried out through established LFFS, field demonstrations, and SBOs Farmers meetings. The topics covered included dairy management, animal breeding, cooling facility, financial management among others. Table 3 shows the trainings received by farmers from the different milk sheds as captured from the recent farm survey undertaken. From the findings, the percentage of farmers trained in various disciplines, based on whole sample are: breeding including artificial insemination (AI) and bull selection (39%) , feeds and feeding (34.6%), animal health (33.72%), milk handling and quality (41.35%), animal nutrition (30.21%), fodder establishment (32.55%), biogas (19.65%), record keeping (35.19%), financial services (22.29%), managing dairy enterprise as a business (28.95%), milk marketing (30.49%); Acaricides/ pesticides storage, handling, use and disposal (28.15%); and Integrated Pest management (8.21%). When disaggregated by gender, above 30 years of age, and youth – the same trend is observed, except the females and youth response is higher on feeds and feeding (45.45%). The youth showed the highest response on breeding including artificial insemination (63.64%), milk handling and quality (54.55%), fodder establishment (45.45%), record keeping (45.45%), financial services (45.45%), milk marketing (45.45%), and acaricides / pesticides storage, handling, use and disposal (54.55%). In the milk sheds, the general low trend is observed for Transnzoia, Kericho, Nakuru, Gatanga and Kinangop. Lessos recorded the highest response (over 75%) except in integrated pest management (25%). This was followed by Nyeri recording over 40% response in breeding including artificial insemination (AI) and bull selection, feeds and feeding, animal health, milk handling and quality, animal nutrition, fodder establishment, biogas and record keeping. Kabete milk shed recorded 59.52% in breeding including artificial insemination and bull selection. The youth involvement in the program is highly commendable.

**Table 5: Proportion of farmers who received different trainings through KDSCP disaggregated by gender, age and milk shed**

| Respondent category      |                       | Breeding (including AI, bull selection etc) | Feeds and feeding | Animal health | Milk handling and quality | Animal nutrition | Fodder establishment | Biogas | Record keeping | Financial services | Managing dairy enterprise as a business | Milk Marketing | Acaricides/ pesticides storage, handling, use and disposal | Integrated Pest management |
|--------------------------|-----------------------|---|-------------------|---------------|---------------------------|------------------|----------------------|--------|----------------|--------------------|---|----------------|--|----------------------------|
| Whole sample             |                       | 39.00                                       | 34.60             | 33.72         | 41.35                     | 30.21            | 32.55                | 19.65  | 35.19          | 22.29              | 28.15                                   | 30.49          | 28.15  | 8.21                       |
| Sex of Head of household | Male                  | 38.69                                       | 33.58             | 32.48         | 41.97                     | 29.56            | 32.85                | 20.07  | 35.04          | 23.72              | 27.74                                   | 30.66          | 28.47  | 8.39                       |
|                          | Female                | 39.39                                       | 45.45             | 37.88         | 37.88                     | 31.82            | 30.30                | 16.67  | 34.85          | 15.15              | 28.79                                   | 28.79          | 25.76  | 6.06                       |
| Gender Age               | Youth                 | 63.64                                       | 45.45             | 36.36         | 54.55                     | 18.18            | 45.45                | 36.36  | 45.45          | 45.45              | 36.36                                   | 45.45          | 54.55  | 18.18                      |
|                          | Above 30 years of age | 37.58                                       | 33.64             | 33.03         | 40.00                     | 30.00            | 31.52                | 18.48  | 34.24          | 20.91              | 27.27                                   | 29.09          | 26.67  | 7.58                       |
| Milk shed                | Lessos                | 83.33                                       | 89.58             | 87.50         | 89.58                     | 81.25            | 85.42                | 85.42  | 87.50          | 89.58              | 95.8                                    | 83.33          | 75.00  | 25.00                      |
|                          | Trans-Nzoia           | 21.95                                       | 17.07             | 31.71         | 48.78                     | 14.63            | 19.51                | 4.87   | 31.71          | 12.19              | 14.63                                   | 19.51          | 21.95  | 12.19                      |
|                          | Kericho               | 47.62                                       | 21.43             | 16.67         | 14.29                     | 21.43            | 11.99                | -      | 7.14           | 16.67              | 16.67                                   | 11.90          | 14.29  | 4.76                       |
|                          | Nakuru                | 31.71                                       | 31.71             | 31.71         | 46.34                     | 17.07            | 26.83                | 24.39  | 56.09          | 26.83              | 26.83                                   | 65.85          | 41.46  | -                          |
|                          | Gatanga               | -   | 16.67             | 2.38          | 19.05                     | 16.67            | 2.38                 | 2.38   | 4.76           | -                  | 2.38                                    | 2.38           | -  | -                          |
|                          | Kabete                | 59.52                                       | 26.19             | 26.19         | 47.62                     | 26.19            | 33.33                | 21.43  | 38.09          | 14.29              | 28.57                                   | 33.33          | 11.90  | 16.67                      |
|                          | Nyeri                 | 53.66                                       | 53.66             | 53.66         | 46.34                     | 51.22            | 46.34                | 4.87   | 43.90          | 7.32               | 19.51                                   | 12.19          | 51.22  | 2.43                       |
|                          | Kinangop              | 6.82  | 11.36             | 11.36         | 11.36                     | 4.55             | 0.25                 | 2.27   | 4.55           | -                  | 9.09                                    | 6.82           | 2.27   | -                          |

**Table 6: Synopsis of strengths of the modules used to reach farmers**

| <b>Module</b>   | <b>Description</b>   |
|---|--|
| Farmer Groups, Cooperatives and Federations                 | In doing this the groups acquired a corporate image in the eyes of the community, which in turn attracted individual farmers to participate. This has helped as more milk was bulked and collectively marketed at a better price. In addition, farmers were able to learn about milk hygiene to avoid milk spoilage and in particular the dangers of using plastic containers.   |
| Farmers' Field Days   | These field days attracted many individual farmers who had absconded as members of the SBOs, in addition to luring others to join them. This resulted in more milk being bulked with commensurate increase of money in their pockets. The other benefit to the farmer was the ability to interact with many players in the dairy industry, thus learning more on dairy management and sources of efficient inputs.                       |
| Livestock Farmers' Field Schools                            | From the onset farmers have embraced this mode of education as it is conducted within their localities and facilitated by familiar SPs using the local language. This has resulted in better dairy husbandry and increased milk production   |
| Exchange tours  | This has worked well for the program. First, it has raised the morale of the farmers to work with the program. Second, it has provided an opportunity for learning and for others an opportunity to travel outside their regions. Third, this has enabled knowledge transfer and farmers are now domesticating what they learned in dairy activities. The result of course has been increased milk production and more household incomes |
| Establishment of Demonstration Farms                        | By its nature this method gives the farmer 'a whole new world' in the area of dairy nutrition. They now understand that feeding dairy cows with dry feeds followed by a lot of water is the way to go! In addition, they have learned how to grow and manage different fodder instead of relying only on grass throughout the year.  |
| Facilitating the SBOs to learn about new dairy technologies | This has been done through dairy forum like ESADA conference besides, inviting technology suppliers to exhibit to the farmers during agricultural shows, exhibitions and seminars  |
| Silage demonstration  | This activity was embraced by the farmers, as it enabled them to feed their dairy animals throughout the year, rainfall notwithstanding. For some this was a first and a must do. This has had a positive impact in milk production.   |



## **CASE STUDY I: Mr MURIMA –Githagara Village, Kahuro District-Murang'a County**

*"I am now able manage my dairy enterprise a better manner"* says Murima. He retired from civil service in 2010 but had started dairy farming way back in 1999. He has been a member of Kahuro livestock Breeders Cooperative Society Ltd where he delivers the milk from his herd of 6 dairy animals.

When the program wanted to start an LFFS in Githagara he willingly offered his home as a venue for the meetings, a move he cherishes long after the end of the trainings. All his animals are now registered and he is also doing milk recording all with the help of the program.

He has also learnt new skills in profitable dairy farming like feed conservation, homemade rations and livestock diseases management, which now helps him manage his herd.

He is able to maintain production even in time of draught through conservation and proper feeding



**Mr Murima explains a point to other farmers during LFFS training**

With an average of 30kgs per day he is able to get 750 KES per day which translates to KES 22,500 per month out of which he is able to meet his family needs. On his 3 acre farm that has coffee, bananas, maize, other local crops and fodder he does not buy food.



**On the left is Mr Murima's Animals in the zero grazing unit.  
(Photos by Ng'ethe John)**

Together with his wife, they are managing the farm with occasional support from casual labourers. He hopes to be able increase his dairy production to 50kgs per day soon.



**Mr Murima on the right sitting participates in an LFFS facilitated by Ms Nduta.**

### 3.2.3 Facilitated working linkages between SBOs and SPs

During the reporting period, the program continued to provide information on input supply sources, linking producers with the suppliers, linking businesses/enterprises to financial service providers and helping the SBOs and service providers meet conditions to access credit. KDSCP further provided market information and access to services and provided training and technical assistance to the producer groups. In this respect, a total of 142 new service providers (SPs) were linked with SBOs in the program area, resulting in a total of 1024 SPs linked to date against the program target of 500 by end of year 5. This has been made possible by the buy-in partners had with the program, having seen how its impacts were transforming the lives and the numerous business opportunities that exist within the sub-sector.

### 3.2.4 Increased uptake of dairy management technologies

Due to the increased number of SPs there has been an increase in technological transfer resulting into increased demand for A.I services (Table 7), improved breeds, increased purchase of dairy machinery, ICT accessories like digital weighing scales and computerization, pulverisers and chaff cutters. The SPs have also contributed in the increase of the number of beneficiaries and those trained in the program area.

**Table 7: Percentage of farmers adopting Artificial Insemination (AI) Technology and breed improvements disaggregated by gender and age and age**

| Respondent category             |                       | % AI Technology Adoption | % with improved breed |          |          |
|---------------------------------|-----------------------|--------------------------|-----------------------|----------|----------|
|                                 |                       |                          | Local                 | Improved | Pedigree |
| <b>Baseline</b>                 |                       | 39.9                     |                       |          |          |
| <b>Whole sample</b>             |                       | 97.36                    |                       |          |          |
| <b>Sex of Head of household</b> | Male                  | 83.71                    | 12.42                 | 75.0     | 12.58    |
|                                 | Female                | 72.58                    | 11.41                 | 83.22    | 5.37     |
| <b>Gender/Age</b>               | Youth                 | 81.82                    | 4.17                  | 87.50    | 8.33     |
|                                 | Above 30 years of age | 81.21                    | 12.45                 | 76.24    | 11.31    |
| <b>Milk shed code</b>           | Lessos                | 79.17                    | 6.47                  | 93.53    | -        |
|                                 | Trans-Nzoia           | 48.78                    | 13.68                 | 85.47    | 0.85     |
|                                 | Kericho               | 95.24                    | 35.05                 | 61.86    | 3.09     |
|                                 | Nakuru                | 53.66                    | 17.65                 | 77.45    | 4.90     |
|                                 | Gatanga               | 97.62                    | 8.65                  | 80.77    | 10.58    |
|                                 | Kabete                | 92.86                    | 0                     | 11.54    | 88.46    |
|                                 | Nyeri                 | 95.12                    | 0                     | 98.72    | 1.28     |
|                                 | Kinangop              | 90.91                    | 12.75                 | 86.27    | 0.98     |

For the A.I services, there is a high increase in adoption (97.36%) in all categories and from all milk sheds as compared to adoption during the baseline survey (39.9%). This is attributed to the good work of the BDS service providers, providing farmers with skills on improved breeding and its benefits. Gatanga (97.62%), Kericho (95.24%) and Nyeri (95.12%) recorded the highest adoption rate, most probably because of the advancement in the enterprise in these milk sheds

where farmers run it as a business. Lowest levels of adoption are seen in Transnzoia (48.78%). These good results are believed to be as a result of the program's good work with the BDS service providers, imparting farmers with skills on improved breeding and its benefits. For the breeds, over 70% of farmers across gender and age have adopted improved dairy breeds, with the youth recording the highest at 87.5%. In the milk sheds, Nyeri (98.72) has the highest number of improved breeds, and Kabete excels in the adoption of pedigree dairy animals (88.46%).

The program also continued to sensitize farmers and service providers on the need to adopt IT and other technologies in the milksheds. Management of the SBOs were sensitized on the need to move forward and install milk cooperative business software available for easier handling of bulk data. Uptake of IT is remarkably encouraging in the program area. Different SBOs have been able to purchase computers to hasten data handling. With the computerization of several SBOs working with the program, the program has been able to improve on the management and efficiency at the SBO level. By the end of the reporting period, a total of 40 SBOs, representing approximately 30 per cent of all SBOs had been computerized. The computerization has resulted into reduction of periods taken before the payments are made to SBO members. Actually, the SBOs have been able to pay their members on the first week of every month unlike before when the payments were made a month later. This can be attributed to the adoption of ICT that has made the operations at the SBO level very efficient. For instance in Kinangop, 10 SBOs are having operational emailing system with its members and 2 SBOS have installed dairy management software, that is, Miharati and Kitiri cooperatives. Likewise, 8 SBOs within the Nakuru milkshed have adopted ICT and installed softwares for managing their accounts.

The program has further continued to promote clean energy and energy efficiency techniques, mainly through promoting the use of biogas technology. This element has been made possible mainly through a collaboration program with KENFAP. To date, a total of 802 biogas digesters have been constructed in the program area by program beneficiaries. 186 biogas plants were constructed in the reporting period. The use of biogas has contributed into making the cooking very efficient and less tiresome as those who have the digesters attest to it. At the same time, the biogas has been used in other instances to power the chaff cutters making it cheaper to operate unlike before when electricity or fuel were the only source of energy. The program has also been at the forefront in making the MBCs working with its beneficiaries be environmental compliant. By the end of the period under review, a total of 32 milk bulking centres/cooling plants had either been installed or rehabilitated to serve dairy farmers in all the eight milksheds with majority of the cooling plants meeting the HACCP quality standards and national certification standards.

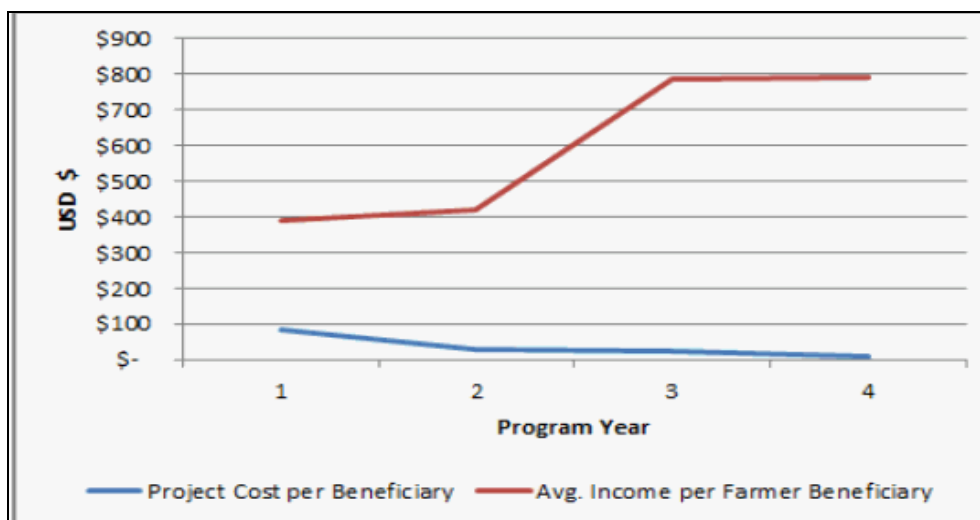
### **3.3 Component Three: Increase Availability of Dairy Business Development Services**

The KDSC implementation method focuses on building capacity of BDS providers, i.e. switching from assisting micro enterprises directly to ensuring sustainable access to services through functioning markets. To achieve this objective, and for effectiveness, outreach, and impact, the

program uses a portfolio approach in provision of BDS. This entails working with multiple partners as BDS providers rather than work with one or just a few and also the capacity building of the providers to provide a range of services (with some embedded), rather than just one for increased effectiveness.

### **3.3.1 BDS conference**

KDSC continues to build the capacity of various stakeholders on the BDS methodology. Through its facilitation, the sixth BDS conference was held at *Sarova Whitesands Hotel, Mombasa, Kenya* from 21st to 25th November 2011. During this conference, KDSC sponsored 8 representatives of federations at a cost of KShs 600,000 fully funded and further four MOLD officials partially funded to a total of KShs 150,000. The Conference trained members on the latest methodologies and practice for designing value-chain programs that incorporate strategies for sustainable impact. Participants learned how to design programs that result in *market-based solutions to MSME constraints* such as market access, input supply, technology/product development, management training, policy reform, and access to finance. Examples were used from enterprise development programs and practitioners in Kenya and the entire East African region. Some of the topics discussed in the conference included: Policy dialogue with senior government officials; Knowledge sharing through presentations by various project implementing organizations; Learning on current best practice through presentations by industry experts both international and local; and Excellent networking opportunities as the conference attracts a wide range of enterprise development practitioners. The use of the BDS approach to implement KDSCP has been lauded as a critical success factor for the program, as evident by findings of a recent survey by a consultant, Strategic Business Advisors (Africa) Ltd (SBA) that evaluated the effectiveness of KDSCP's BDS approach. The methodology enabled KDSCP to use service provision as an entry point in small enterprise development and target a range of market providers as critical players. The approach facilitated viable linkages between industry associations, processors, smallholder business organizations (SBOs), and commercial input and service providers to build robust, sustainable partnerships and achieve economies of scale. According to the survey, due to the use of BDS approach, the program has realized a decrease in program cost per beneficiary farmer during the first four years since program implementation. During the same period, the average income per dairy farmer in the program increased by approximately 155% from USD 306 per year per farmer in 2009 to USD 780 in 2011. This illustrates that the program has had significant impact on farmer beneficiaries while not necessarily increasing spending to meet its objectives.



**Figure 1: KDSC program cost per beneficiary and average income per beneficiary farmer as a result of using the BDS approach**

### **3.3.2 Facilitated access to financial services**

Working with our partners, we were able to appreciate the fact that financial challenges are linked to the reality of life in rural areas. Rural areas typically face high transaction costs compared to urban areas, because farmers and other service providers are more dispersed, infrastructure is less developed and branch networks are more expensive to maintain. It is difficult and expensive to get the information necessary to assess a borrower's ability and willingness to repay a loan. Collateral is more limited and often less documented, and it is more difficult to liquidate, increasing provisioning and foreclosure costs for financial institutions. Financing agriculture-related activities creates an additional set of costs and risks, from its seasonality and requirements for longer terms, to the fact that many borrowers will face the same production and price risks and thus collectively pose a problem to the lender. For these reasons, financial institutions are reluctant to extend credit to small farmers, leaving them vulnerable to food insecurity. To address these challenges, KDSCP has been working with financial service providers and linking them to dairy farmers for ease of access to financial services for expanding their dairy businesses. As a result, the program was able to assist 15,767 farmers to access loans from financial institutions during the period under review. This brings the total number of farmers that have benefitted to 58,581 surpassing the program target by 30 per cent.

During the reporting period, the program facilitated the expansion of embedded service and input delivery through SBOs and processors as well as the development of innovative and appropriate technologies, management practices and financial service availed through commercial business service providers. With regard to innovations, the program was able to introduce one of the proprietors of a milk dispensing technology, Latte Box Dispensers, to SBOs working with the program, for milk supply purposes. The success of a milk dispensing business depends on a reliable supply of good quality milk. Farmers sell their milk at different prices depending on distance and also the season with prices ranging from Kes30-50 (USD

0.36-0.60). The milk sheds targeted for the supply of milk were mainly Kabete and Kinangop. Milk dispensers provide ample and favorable conditions required for milk distribution; they allow for sale of milk in varying quantities as needed, provide cooling facilities, have an easy to clean system and can hold reasonably large amounts of milk to meet needs of consumers. Milk dispensers are strategic for distributing milk to urban residential neighborhoods, institutions such as schools and hospitals as well as other retail outlets including supermarkets. To this end, the proprietor has sold 25 milk dispensers.

Mr. Antonio is the main supplier of the dispenser technology which he imported from Italy. His company imports from Italy and modifies the technologies to fit local conditions and market. He various sizes and types of milk dispensing technologies which can either be stationery (in a shop) or mounted in a truck (Mobile dispensing unit) with prices ranges of between USD 5,687-21,937. The innovation presents a good opportunity for milk cooperatives and entrepreneurs to market their milk.



**Mr. Antonio, the proprietor of Latte Box Dispensers explaining to Ms. Robin Johnson of USAID how the milk dispensing technology works during the Agribusiness trade fair in Nakuru.**



## CASE STUDY 2: NJERI BEDAN MAKES USE OF LINKAGE TO PROMOTE HER VETERINARY WORK



**Njeri inside her agrovet shop in Githumu -  
Photo by Ng'ethe Iohn**

About the program Njeri says *“You just came at the right time”* Njeri graduated from AHITI in 2001 and having worked for different SPs she decided to go it alone after her marriage to Bedan. She opened an Agrovet at Gatanga to help supplement the clinical work. With passion for her job, she enjoys training farmers who reciprocate by giving her more work.

When the program discovered her talents and potential it also linked her to Gitaibuka Youth group which she does not regret. From the youth group she was linked to other groups in her area which has resulted in her income increasing by 50% from increased cases and sales of minerals, feeds and AI services. She is now a darling for Highland and Kiarutara Dairy groups who have benefited from her skills of training and understanding of issues related to dairy farming. From her own words the relationship with the program *“just came in time”*

She can't help to thank the program for helping elevate her work. Even with the program almost coming to an end, her established contacts remain intact. *“I will forever be grateful to you and the program. It has helped me and the family business”* She says. The ease with which she trains the farmers and the simplicity of her communication of the knowledge gives most of her farmer listeners the confidence they need.



### **3.3.3 KDSCP agreement with Virtual City (VC)**

The program entered into an agreement with VC to ensure improved efficiency and effectiveness of Cooperatives & processors through the use of Agrimanager software developed by Virtual City. Through this arrangement, the program will provide market information to enable VC make meaningful business decisions.

#### **4. Environmental Degradation Mitigation Measures**

In order to comply with environmental conditions in areas of intervention, the program has continued to promote activities (at the farm, service providers and at bulking centre level) that mitigate harmful environmental practices. Program partners were encouraged to work towards sustainable management practices that reduce soil erosion, soil and water pollution, and emissions, among others, to safeguard the sectors' future contribution to national economic growth. On specifics, during farmers' trainings on disease control, emphasis continued to be put on proper pesticide (cans) waste disposal through incineration or dumping in pit latrines to protect the environment. Drug withdrawal periods have been emphasized to be observed especially for mastitis cases. As reported in the farm survey, farmers practicing withdrawal periods after deworming and spraying were very low (below 10%). Majority of farmers, 90%, practiced disposal of acaricide and pesticides containers. This difference is due to the toxic and fatal nature of these chemicals. The project also trained dip attendants and part of the curriculum was the safe disposal of acaricide wastes and waste containers. Proper waste disposal was also emphasized during trainings of farmers at the SBO level.

The program continued to promote the adoption of biogas technology for energy supply. Through collaborative approaches, it worked with SPs and KENFAP to promote the use of biogas. Through program intervention, a total of 186 biogas digesters were installed in this reporting period. Some farmers are not only using biogas for cooking but also to power their chaff cutters. At the same time, the program has been promoting the use of energy saving jikos in partnership with a new SP-Pekisma Enterprise.



## 5. Gender and Youth intervention

The program continued to promote the involvement of youth and women in the implementation of its activities.

Notable accomplishments with respect to gender and youth for the reporting period include;

- In Trans Nzoia milk shed, out of the twelve (12) cooperatives working with the program four (4) are headed by women namely Tongaren, Tarakwa Sacco, Koitogos and Chesoi cooperative in Marakwet.
- Establishment of a youth revolving fund at Kitiri Dairy Cooperative Society in Kinangop. Kitiri DCS developed a proposal to International Labour Organization (ILO). ILO awarded the group a grant of KShs. 1.5 million (USD 17,857). The group then raised KShs. 0.75 million (USD 8,928). In total, the Youth Fund was set up with KShs. 2.25 million (USD 26,785). The scheme was set up to encourage the youths to get more involved in dairy production. For one to benefit from the fund, s/he must demonstrate an interest in dairy and must get recommendation from the DCS management committee. In addition the beneficiary must also make a commitment to sell milk through the cooperative. This enables the group to recover the loan amount advanced through a check-off system when paying farmers for the deliveries. By the end of June, 90 youths had benefited from the fund with the management committee reporting that a similar number had been put on the waiting list. The initiative has resulted in a rapid increase in membership in the cooperative.
- In Lessos milk shed, the program observed that fewer women were being trained in the LFFS due to the male dominance in ownership of dairy animals. The program mobilized women to attend such meetings against the cultural values that prefer men to attend meetings. Remarkable progress was reported in the milk shed with many women starting to show up in LFFS.

## 6. Challenges

During the period under review, the following challenges were flagged;

- Milk price volatility; which caused the inability of the dairy milk processors to absorb milk produced by farmers in certain times of the year, leading to non-collection of milk in some cases, low milk prices and delayed farmer payments. For instance in Lessos and Trans Nzoia milksheds, NKCC reduced the price of milk for those with contracts from KShs 35 to KShs 22 (USD 0.4-0.3) per litre of milk, in late 2011. Due to the reduction in milk prices, farmers from those areas managed to seek alternative marketing avenues that would guarantee competitive prices. In places like Gatanga, SBOs have ventured into milk bar business where they sell their milk as value added to the ready market. In this situation, they sell milk at KShs 60 (USD 0.75) per litre compared to the low prices offered by processors.
- Some processors unable to pay SBOs; Lari Dairies Alliance went under receivership during the year and has not paid some SBOs money from their milk supplies. The most affected are South Kinangop DCS with close to KShs.9M (USD 23,750) and Gatamaiyu DCS with over KShs. 10 M (USD 125,000).
- Market distortion: Some development programs being implemented in the program area continue to perpetuate dependency attitudes by paying farmers and funding purchases or giving away inputs and dairy equipment. Some stakeholders still expect payments from the project for attending capacity building sessions, while some service providers demand payment to train farmers. The program has been able to put in place measures to address this challenge through capacity building of the dairy farmers. KDSCP uses an approach in which farmers who are members of the dairy societies make contributions in order to acquire cooling plants from their milk proceeds. At the same time, the program has established a mechanism in which dairy farmers are linked directly to service providers who offer services and inputs to these farmers and payments are made through check-off system on behalf of the farmers by the processors. This has enabled members to understand that whenever they want to access any service, it is them who bear the cost.
- Milk collection infrastructure: The program has continued to advise farmers on the need to have their own cooling units in their SBOs. However, based on the financial requirements, there has been a low uptake of this aspect in the project area. Members of some of the SBOs have been able to contribute towards this and have managed to purchase cooling units. However, majority of the cooperatives have not been successful in this. To address this, the program has embarked on involving other development partners that include the government and banks to provide financial assistance. Constituency development fund has been utilized in some of the areas while at the same time, the program has linked SBOs with financial institutions in order to acquire loans. The program has also contributed by providing technical assistance to the cooperatives towards the development of viable and bankable business plans that can expedite the loan processing.

## 7. Lessons Learned

The organization of farmer groups into business organizations has enabled dairy producers to increase their bargaining power with the processors. The formation of federations has resulted in increased milk prices at the farmer level and the same time qualifying of members for bonuses given by processors.

Increased capacity building of service providers has resulted in increased sales of their products. Through the linkages facilitated by KDSC program between service providers and farmer cooperatives have enabled farmers to invest in technologies like digital weighing scales, computerization and biogas equipment at affordable rate. This has led to realization of the objectives of the program in enhancing development of small business organizations.

Sudden lowering of prices by processors, especially NKCC, a major raw milk buyer has affected the performance of SBO'S by members opting to sell their milk to milk traders who offer better prices hence affecting the volumes. However, since the price reduction only affected those without supply contracts, it has reinforced the importance of having Supply Contracts with processors which can only be facilitated through cooperatives.

Collaboration with other agencies has yielded positive results for the program. There has been continuous engagement of other stakeholders in the industry which has culminated into reaching out to many dairy farmers with range of benefits. Some of the stakeholders include FHI, KDB, DTA and ministry of livestock development.

Some of the elements that allowed the program achieve its goal include;

- The formation of Milk Shed Working Group (MSWG) that tackled the farmers' issues.
- The program's involvement with the provincial administration and key ministries.
- Building the capacity of the farmers in dairy management through LFFS.
- Linking the farmers to financial providers to get loans to improve dairy breeds.
- The facilitator's knowledge of the area, experience and the Team Spirit practised.
- Embedding all credit payments to be paid where the farmers deliver milk.
- Building capacity of the farmers in handling milk and appliances associated in a hygienic way to avoid milk spoilage and rejection.
- Encouraging use of silage by demonstrating how to make it.
- Creating awareness and demystifying the perception that BDS providers are expensive and serve the elite only. This stimulated the Business service providers to view smallholder farmers, SBOs and SPs as potential customers.
- Building the capacity of both the users and the suppliers in ordering, sourcing, purchasing, warehousing and supply.

## 8. Work plan for Year 5

| Quarter <sup>1</sup>   | Q 1 |   |   | Q2 |   |   | Q3 |   |   | Q4 |    |    | Anticipated Outputs/Outcomes   | Responsible                             | Results/achievement                                 |
|--|-----|---|---|----|---|---|----|---|---|----|----|----|--|---|---|
| Month  | 1   | 2 | 3 | 4  | 5 | 6 | 7  | 8 | 9 | 10 | 11 | 12 |  |   |   |
| <b>2.1 Component One – Enhance capacity for milk production input quality certification and market promotion</b> |     |   |   |    |   |   |    |   |   |    |    |    |  |   |   |
| Activity 2.1.1: promote the work of the DTF and promote a donor working group                                    |     | x |   |    | x |   |    |   | x |    | x  |    | 2 DTF meetings held to promote Synergy and leverage funds for the sector                                     | KDB/KDSCP                               | 1 DTF meeting held                                  |
| Activity 2.1.2: Promote Quality Standards and Support Policy reform initiatives                                  |     | x | x | x  | x | x | x  | x | x | x  | x  | x  | Generic consumption campaigns/Increase in milk consumption.  | KDPA/KDSCP/KDB/Consultants              | Generic consumption campaigns launched country-wide |
| Activity 2.1.3: Promote market expansion of milk and value added dairy products.                                 |     |   | x |    |   | x |    |   | x |    |    | x  | 20 counties sensitized and funds leveraged to support the Dairy sector.                                      | MOLD/KDSCP/Consultants                  | On-going  |
| Activity 2.1.4: Facilitate institutional and association capacity building                                       |     | x |   | x  |   | x |    |   | x |    | x  |    | Develop a Sow and award and monitor number of labs sensitized towards accreditation with 17025 certification | KENAS/KDSCP/Consultants                 | NKCC staff trained KEBs on certification            |
| <b>2.2 Component Two - Develop Dairy Smallholder Business Organizations (SBOs)</b>                               |     |   |   |    |   |   |    |   |   |    |    |    |  |   |   |
| Activity 2.2.1: Promote smallholder business development model   |     |   |   | x  |   |   | x  |   |   | x  |    |    | 12 additional Cooling units installed and or rehabilitated/Launched  | Consultants/Facilitators/SBO management | 12 coolers rehabilitated                            |
| Activity 2.2.2: Promote solutions and create SBO Business Plan and Milkshed Action Plans.                        | x   | x | x | x  | x | x | x  | x | x | x  | x  | x  | 10 additional SBOs transformed into substantial business entities above the break-even point                 | SBO Management/KDSCP/Consultants        | Achieved  |
| Activity 2.2.3: Promote Embedded Services within Dairy Smallholder Business Organization and Processors.         |     | x | x | x  | x | x |    | x | x | x  | x  | x  | At least 4 additional Processors offering Embedded services  | KDPA/KDSCP/Consultants                  | On-going  |
| Activity 2.2.4: Encourage Quality based systems and contracts.   |     |   | x | x  | x | x | x  |   |   |    |    |    | Ensure 4 additional best practices are posted on KDSC  | KDSCP/Consultant                        | So far 2 have been                                  |

<sup>1</sup> Quarter periods corresponds to CLIN period, that is quarter one period starts in May 2012

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |                    |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------|---|
|  |   |   |   |   |   |   |   |   |   |   |   |   | website   |                    | posted  |
| <b>2.3 Component Three - Increase Availability of Dairy Business Development Services</b>  |   |   |   |   |   |   |   |   |   |   |   |   |   |                    |   |
| Activity 2.3.1: Continuous needs Analysis for Dairy Industry business development service. | x |   |   |   |   |   |   |   | x |   |   |   | 75 existing and 50 new BSPs will continue to be supported   | KDSCP Facilitators | On-going  |
| Activity 2.3.2: Promote Accreditation of and standards for Dairy Service Providers         | x | x | x | x | x | x | x | x | x | x | x | x | 50 Dairy SPs accredited   | KDSCP/Consultants  | Still collecting data   |
| Activity 2.3.3: Directory of Business Service Providers for dairy Industry                 |   |   |   |   |   |   |   | x | x | x | x | x | Functional and sustainable e-portal   | KDSCP/Consultants  | Achieved, KDSC working on getting a firm to sustain the portal after program exit |
| Activity 2.3.4: Forge Business to Business Linkages  | x | x | x |   |   | x | x | x |   |   | x | x | Launch/ re-launch and promote the newly established MBC to increase membership. Develop a sow and award | KDSCP/Partners     | On-going  |
| Activity 2.3.5: Stimulate Value Chain Financing  |   |   | x | x | x | x | x | x | x | x | x | x | 12,000 additional farmers receiving loans from Financial service providers                              | KDSCP Facilitators | On-going, though some degree of success has been realized                         |
| Activity 2.3.6: Build Capacity of New and Existing Business Service Providers              |   | x |   |   |   |   |   |   |   | x |   |   | 50 additional BDSP supported and Linked to Beneficiaries  | KDSCP Facilitators | Achieved  |

## 9. Performance Data Table

| Impacts   |                 |                                |                        |                                   |  |
|---|-----------------|--------------------------------|------------------------|-----------------------------------|--|
| Performance Indicator   | Baseline        | Year 5                         |                        | Cumulative/<br>progressive Actual | Comments   |
|   | Value<br>(2008) | Cumulative<br>Annual<br>Target | Actual (FY<br>2011/12) |                                   |  |
| Household level impacts   |                 |                                |                        |                                   |  |
| Increase in smallholder household income (%)                              | 2043            | 80%                            | 400%                   | 208%                              | Current estimates indicate that farmer incomes from the sale of milk increased to US\$ 127.74 (Kshs. 10,219.06) per month. The cumulative average income since the beginning of the project by the end of the quarter was US\$78.74 (KShs 6,299) showing an increase of 208% compared to baseline value                                    |
| Number of rural households benefiting (Number)                            | 0               | 300,000                        | 79,483                 | 327,758                           | A considerable number of farmers still sell to hawkers due ready market. However, there has been an increase in coop membership due to improved prices through federation activities in all milksheds. Of all active members of the SBOs, women account for 44%.   |
| Sub-Sector Level Impacts  |                 |                                |                        |                                   |  |
| Total volume of milk purchased from smallholder dairy farmers (MT )       | 316,980.3       | 360,980.3                      | 212,624                | 680,779                           | A considerable increase in volumes sold by farmers was observed in the year. This increase can be attributed to increases in yield resulting from farmers adopting program-promoted productivity enhancing technologies with the onset of rains. The value also increased due to improvement of milk prices through federation activities. |
| Total value of milk purchased from smallholder dairy farmers (US Dollar)  | 83.8M           | 95.4M                          | 77.08M                 | 200.88                            |  |
| Total volume of exports to regional and international markets (MT)        | 17,500          | 23,500                         | 20.5 MT                | 57.1 MT                           | This data is reported one year later. There was a slight drop in export to regional and global markets occasioned by a shift by dairy firms from producing for exports to domestic consumption.  |
| Total value of exports to regional and international markets (US Dollar)  | 14.32 M         | 11.75M                         | 16.03 M                | 31.33 M                           |  |
| % change in volume of milk conforming to quality standards increased (%)  | 96.25%          | 90%                            | 45%                    | 140%                              | The quantity of milk rejected continued to decline significantly with most milk sheds having less than 5% of total deliveries as reject.   |
| Total value of milk conforming to quality standards increased (US Dollar) | 96.25%          | 90%                            | 45%                    | 140%                              |  |
| % change in volume of milk and dairy products sold by                     | 398,637 MT      | 15%                            | 40.5% (548,            | 38%                               | Volume of milk sold through the value chain has been rising  |

| Impacts  |                              |                                |                        |                                   |   |
|--|------------------------------|--------------------------------|------------------------|-----------------------------------|---|
| Performance Indicator  | Baseline<br>Value<br>(2008)  | Year 5                         |                        | Cumulative/<br>progressive Actual | Comments  |
|  |                              | Cumulative<br>Annual<br>Target | Actual (FY<br>2011/12) |                                   |   |
| processors   |                              |                                | 996000 MT)             |                                   | continuously during the program implementation.   |
| % change in value of milk/<br>dairy products sold by<br>processors (Percent)   | 106.3M<br>US\$               | 15%                            | 28%<br>(US\$144M )     | 36%                               |   |
| Number of jobs created in<br>the value chain (Number)  | 0                            | 36,000                         | 10,718                 | 25,345                            | There are new jobs resulting from investment in embedded service provision by SBOs & new service providers in the entire dairy value chain  |
| Firm level impacts   |                              |                                |                        |                                   |   |
| Number of producers<br>accessing/ receiving/<br>utilizing BDS services,<br>inputs, technologies, and<br>management practices | 0                            | 220,000                        | 40,790                 | 239,778                           | Program has linked all farmer groups with service providers in the 8 milk sheds. The provision of embedded services has resulted in increased number of active membership in the SBOs.  |
| Farmers using improved<br>technology increased<br>(Number)   | 39.9%                        | 180,000                        | 38,137                 | 179,559                           | Program data shows a marked increase in the proportion of farmers using AI (97.36) compared to the baseline proportion (39.9%). The adoption of technology was low in the female headed households (72.58%) as compared to male headed households (83.71%). |
| Increase in productivity of<br>milk per cow/day (Lt)   | 6.4 <sup>2</sup>             | 15                             | 10.1                   | 8.4                               | The program has been able to achieve 67.3% of the target of 15litres/cow/day. Kabete milkshed recorded the highest yields 16.5 litres/cow/day followed by Nyeri with 12.6litres/cow/day and Kinangop with 11.9litres/cow/day.                               |
| Increase in gross margin<br>per Lt of milk (Percent)   | Kshs. 5.8<br>(USD<br>0.0725) | 40                             | 86.7                   | 82.1                              | The average gross margin since the intervention of the program was KShs 10.56 (US\$ 0.132). This shows an increase of 82.1% compared to baseline value.   |
| Reduction in cost of<br>production - farm gate (%)   | Kshs. 14.2                   | 25                             | 29.2                   | 29.2                              | The cost of production reduced cumulatively by 29.2% against the project target of 25%. The cost of milk production reduced to Kshs. 10.08(US\$ 0.126).   |
| Component I - Enhance Capacity for Milk and Production Input Quality Certification and Market Promotion                      |                              |                                |                        |                                   |   |
| Number of industry<br>policies improved/enacted  | 0                            | 3                              | 1                      | 22                                | Program has been recognized by the MOLD in its facilitation that led  |

<sup>2</sup> This is baseline value from the program survey. This differs with the value used in the PMP that was 10.3 litres/cow/day. The program therefore should base its interventions on the baseline value of 6.4 litres/cow/day.

| Impacts   |                             |                                |                        |                                   |   |
|---|-----------------------------|--------------------------------|------------------------|-----------------------------------|---|
| Performance Indicator   | Baseline<br>Value<br>(2008) | Year 5                         |                        | Cumulative/<br>progressive Actual | Comments  |
|   |                             | Cumulative<br>Annual<br>Target | Actual (FY<br>2011/12) |                                   |   |
| Number of quality certification frameworks (milk product, animal feeds) developed, implemented/enforced | 0                           | 2                              | 0                      | 1                                 | to the development of the Dairy Master Plan.<br><br>Dairy draft regulations developed by the project is undergoing review by legal professional so as to make it acceptable by the government.<br><br>Kenya livestock policy has been published for consideration by the government |
| Total Value of non-project resources leveraged (US\$)   | \$0                         | \$25M                          | 2.2M                   | 27.52M                            | These funds have been provided by farmers own contribution, government through constituency development fund (CDF), other MFIs that give loans to beneficiaries and processors.   |
| Increased revenue collected by KDB (%)  | US\$ 1.066M                 | 30%                            | 50%                    | 37.5%                             | Volume of milk sold through the value chain has been rising continuously over the years of program operation The cess is levied by KDB on all dairy products sold by.   |
| Component 2 - Dairy Smallholder Business Organization (SBO) Development                                 |                             |                                |                        |                                   |   |
| Number of producer organizations strengthened   | 0                           | 120                            | 11                     | 135                               | During year 5, eleven new SBOs joined the program due to improved milk prices and embedded services promoted by the program   |
| Number of SBOs/MBCs with HACCP and/or national certification  | 0                           | 40                             | 69                     | 69                                | SBOs that have business plans implemented together with those whose management attended training on quality issues have acquired national certification. Processors have also achieved this certification in their milk chilling plants.  |
| Number of SBO/MBCs transformed into sustainable business entities                                       | 0                           | 120                            | 11                     | 135                               | All SBOs working with the program operate profitably, according to the official audit reports and the profit and loss accounts that are done on a monthly basis.  |
| Number of cooling units installed/rehabilitated in SBO/MBCs (Number)                                    | 0                           | 35                             | 12                     | 90                                | 12 coolers were rehabilitated in the year.  |
| Component 3 - Availability of Dairy Business Development Services                                       |                             |                                |                        |                                   |   |



| Impacts  |                             |                                |                        |                                   |   |
|--|-----------------------------|--------------------------------|------------------------|-----------------------------------|---|
| Performance Indicator  | Baseline<br>Value<br>(2008) | Year 5                         |                        | Cumulative/<br>progressive Actual | Comments  |
|  |                             | Cumulative<br>Annual<br>Target | Actual (FY<br>2011/12) |                                   |   |
| Number of firms providing new business services to producers (Number)      | 0                           | 500                            | 142                    | 1024                              | Program activities have focused on embedded service provision to increase the sales volume and revenues for the providers. All SPs working with the program now provide farmer extension services as an embedded service. |
| New technologies/management practices made available for transfer (Number) | 0                           | 30                             | 0                      | 24                                | New technologies still under research in collaboration with KARI  |
| Dairy farmers receiving loans from financial service providers             | 0                           | 45,000                         | 15,767                 | 58,581                            | Private AI service providers and SBOs working with the program have benefitted from program linkages with financial service providers. About 37% of those receiving loans were women.                                     |
| Number of producers receiving short-term training                          | 0                           | 153,000                        | 47,154                 | 137,588                           | Farmers especially in TransNzoia demand trainings hence have shown some improvements for the program. Other areas still carry out a lot of mobilization in order to reach more members with trainings.                    |

## 10. Budget Execution

| Kenya Dairy Sector Competitiveness Program                  |                     |   |                                      |
|---|---------------------|---|--------------------------------------|
| Contract No. 623-C-00-08-00020-00                           |                     |   |                                      |
| Quarterly Financial Report September 2012                   |                     |   |                                      |
|   | Budget              | Actual Expenditures thru September 2012 | Remaining Funds as of September 2012 |
| <b>CLIN One (Year 1)</b>                                    |                     |   |                                      |
| Total Estimated Costs                                       | \$ 1,902,995        | \$ 1,902,995                            |                                      |
| Fixed Fee   | \$ 20,324           | \$ 20,324                               |                                      |
| <b>Total Estimate Cost Plus Fixed fee</b>                   | <b>\$ 1,923,319</b> | <b>\$ 1,923,319</b>                     |                                      |
| <b>CLIN Two (Year 2)</b>                                    |                     |   |                                      |
| Total Estimated Costs                                       | \$ 2,183,292        | \$ 2,183,292                            | \$ -                                 |
| Fixed Fee   | \$ 20,607           | \$ 20,607                               | \$ -                                 |
| <b>Total Estimate Cost Plus Fixed fee</b>                   | <b>\$ 2,203,899</b> | <b>\$ 2,203,899</b>                     | <b>\$ -</b>                          |
| <b>CLIN Three (Year 3)*</b>                                 |                     |   |                                      |
| Total Estimated Costs                                       | \$ 2,229,663        | \$ 2,229,251                            | \$ 412                               |
| Fixed Fee   | \$ 24,372           | \$ 24,368                               | \$ 4                                 |
| <b>Total Estimate Cost Plus Fixed fee</b>                   | <b>\$ 2,254,035</b> | <b>\$ 2,253,619</b>                     | <b>\$ 416</b>                        |
| <b>CLIN Four (Year 4)**</b>                                 |                     |   |                                      |
| Total Estimated Costs                                       | \$ 1,555,543        | \$ 1,555,543                            | \$ -                                 |
| Fixed Fee   | \$ 16,261           | \$ 16,261                               | \$ -                                 |
| <b>Total Estimate Cost Plus Fixed fee</b>                   | <b>\$ 1,571,804</b> | <b>\$ 1,571,804</b>                     | <b>\$ -</b>                          |
| <b>CLIN Five (Year 5)</b>                                   |                     |   |                                      |
| Total Estimated Costs                                       | \$ 1,032,815        | \$ 448,615                              | \$ 584,200                           |
| Fixed Fee   | \$ 14,128           | \$ 4,486                                | \$ 9,642                             |
| <b>Total Estimate Cost Plus Fixed fee</b>                   | <b>\$ 1,046,943</b> | <b>\$ 453,101</b>                       | <b>\$ 593,842</b>                    |
| <b>Total Reimbursable Costs</b>                             | <b>\$ 8,904,308</b> | <b>\$ 8,319,696</b>                     | <b>\$ 584,612</b>                    |
| <b>Total Reimbursable Fixed Fee</b>                         | <b>\$ 95,692</b>    | <b>\$ 86,046</b>                        | <b>\$ 9,646</b>                      |
| <b>Total Reimbursable Estimated Cost Plus Fixed Fee</b>     | <b>\$ 9,000,000</b> | <b>\$ 8,405,742</b>                     | <b>\$ 594,258</b>                    |
| * MOD # 8 Transferred \$ 64,865.11 from CLIN 1 to CLIN 3    |                     |   |                                      |
| ** CLIN 4 Expenditures began May 1, 2011 through April 2012 |                     |   |                                      |

## **II. Project Administration**

### **Personnel**

KDSCP continued to operate with a lean staff of four (4) members comprising of the Chief of Party, the Dairy Value Chain Coordinator, Grant Manager and M & E Specialist. During the reporting period, the program recruited a new M & E Specialist after the position fell vacant following the resignation of the previous position holder. Nancy Amayo, Grants Manager, has been approved for transition to the USAID Kenya Feed the Future Innovation Engine Program by the program's CO; the KDSCP team will be notifying it's respective CO of this transition. The program engaged sub-contractors who were involved directly with implementation activities in the field.

### **Changes in the Project**

During the period under review, program activities expanded to new frontiers considered to be under the Feed the Future regions. This was made possible through formation of the Small Scale Dairy Farmers Association (SSDFA) whose membership extends to FtF regions outside the program's original areas of operations.

## Annexes

### Annex I: Letter from AKEFEMA soliciting KDSCP support on addressing high feeds problem in the country



#### ASSOCIATION OF KENYA FEED MANUFACTURERS

P.O. Box 64983 - 0620, Nairobi; Tel: 0717 055465, 0733 361907;  
Telefax: 020 2502502; Email: info@akefema.com  
Website: www.akefema.com

Please Note our New Box Number

Our Ref:.....

P.O Box 60022-00200

Your Ref:.....

Nairobi

Date: 2/08/2012

To

Mr. Mulinge Mukubu

The Country Director

Land O' Lakes

Nairobi.

Dear Mr. Mulinge,

**RE: ASSOCIATION OF KENYA FEED MANUFACTURERS (AKEFEMA) GRAIN PRICE CRISIS POSITION  
PAPER 27 JULY 2012**

The Association of Kenya feed Manufacturers (AKEFEMA) is an industry association mandated by its members to act on its behalf. AKEFEMA members are committed to making quality feeds at an affordable price. A major constraint the industry faces is the availability of good quality raw materials with which to formulate finished products. As you are currently aware there is a crisis with the supply of grain globally due to adverse environmental conditions in some of the major grain producing regions of the world as well as local challenges facing Kenyan farmers. Because of this we are warning of serious implications within the local industry, not least the availability of raw materials but the high price of the same. This will affect the cost of finished products and we as an Association would like to draw notice to this and to suggest some concrete solutions to try to mitigate the impact this will have on our customers and the country.

We would be grateful to receive your support for the same.

Yours Sincerely,

Dr. Jeremy Ashworth,

Secretary General,

Association of Kenya Feed Manufacturers.

Many  
FYI & Action  
if nec.  
Mulingi

## Annex 2: KDSCP achievements as covered in the local daily newspaper, Daily Nation, courtesy of USAID advertisement

Advertising Feature | 37





### USAID Supports Agricultural Cooperatives in Kenya.

**The U.S. and Kenya Partner in Promoting Agribusiness Role in Food Security.**

Kenya is one of twenty focus countries of the U.S. Global Food Security and Hunger Initiative, also known as Feed the Future. Kenya has the potential, not only to feed its own people, but to become an anchor of food security in the region.

As part of the U.S. effort to help Kenya achieve its goal of food security and improved nutrition for its people, USAID/Kenya is investing in strengthening several key agricultural value chains: horticulture, dairy and maize for high rainfall areas in the western regions; and drought-tolerant crops (sorghum/millet and root crop systems), drought-tolerant maize, horticulture, and pulses for the semi-arid areas in the eastern regions, as well as livestock in the northern arid lands. Attention is focused on every "link" in the value chain—from inputs like fertilizer and seeds, to credit, to production methods, storage, transport, processing, farmers' cooperatives, and markets in Kenya, East Africa and overseas.

As we join the Agricultural Sector Coordinating Unit in a sector forum on the occasion of World Food Day, USAID is proud to report recent data that demonstrates agricultural cooperatives are the key to feeding the world:

Between January and March 2012, maize producers in Western Kenya, with support from the USAID Kenya Maize Development Project, consolidated 995 metric tons of assorted grains through village bulking centers and sold 336 metric tons through traders and to the World Food Program. Field data indicates that thanks to improved storage facilities, producer groups are holding 570 metric tons in anticipation of higher market prices later this year.

The USAID Kenya Horticulture Competitiveness Program is supporting the formation of collection centers to help preserve the quality of products and decrease postharvest losses, and to reduce pressure on farmers to sell their produce for less due to lack of storage facilities and reliable traders. As a result, farmers are collectively selling their products in



bulk quantity, and in turn increasing their bargaining power. In the last year, over 2,000 farmers (48 percent women) working with the USAID Horticulture program in Rift Valley region harvested 754,402 kg of passion fruits valued at KShs 60 million from 94 hectares.

In 2009, dairy farmer Mary Rono started a self-help group with 15 members. Today, she is the chairperson of the 365-member Koitagos Dynamic Cooperative Society. "We are now bulking more than 1,000 liters of milk per day, and double the price per liter. We have been able to do a lot with the profits we get from the dairy. We are able to contribute to the school fees of our children. We are able to pay our loans with ease," says Rono.

Since it began in mid-2008, the USAID Dairy Sector Competitiveness Program—implemented by U.S. agribusiness giant Land O'Lakes—has assisted more than 319,000 smallholder milk producers, as well as hundreds of processors, retailers and exporters up and down Kenya's dairy value chain. The result has been an average income boost of \$675 per rural farming family—over \$167 million overall.

USAID further supports agricultural cooperatives by making financing available in the sector. Through USAID-backed loan guarantees and technical assistance, approximately \$9 million in dairy-related loans have been issued since January 2012 across the 32 branches of the Kenya Commercial Bank.

Through its Financial Inclusion for Rural Microenterprises (FIRM) project, USAID is helping to incubate and scale up innovators to help connect farmers to markets and to the information they need to grow more nutritious food. In partnership with the Government of Kenya and private sector counterparts, FIRM supports the goals of Feed the Future by designing and enabling the adoption of sustainable financial services models that promote agriculture-led economic growth, improve livelihoods, and contribute to overcoming food insecurity.



Since it began in mid-2008, the USAID Dairy Sector Competitiveness Program—implemented by U.S. agribusiness giant Land O'Lakes—has assisted more than 319,000 smallholder milk producers, as well as hundreds of processors, retailers and exporters up and down Kenya's dairy value chain.

<http://kenya.usaid.gov>

<https://www.facebook.com/USAIDKenya>

### Annex 3: List of beneficiaries of KDSC Program

| Active members of SBOs with MoU with KDSC | Active members of SBOs with MoU with KDSC (2009) | Active members of SBOs with MoU with KDSC (2010) | Active members of SBOs with MoU with KDSC (2011) | Active members of SBOs with MoU with KDSC (2012) | Farmers reached via other milk shed interventions | Milk shed |
|---|--|--|--|--|---|-----------|
| Kikuyu                                    | 1380   | 382  | 400  |  | 12361   | Kabete    |
| Gikambura                                 | 127  | 153  | 200  | 346  |   |           |
| Sigona                                    | 40   | 43   | 46   | 68   |   |           |
| Muguga                                    | N/A  | 163  | 215  |  |   |           |
| Nderi                                     | 1022   | 52   | 36   | 56   |   |           |
| Gatundu                                   | 200  | 120  |  |  |   |           |
| Thanduka                                  | N/A  | 80   |  |  |   |           |
| Limuru                                    | 6000   | 5950   | 3800   | 7800   |   |           |
| Bibilioni                                 | N/A  | 57   |  |  |   |           |
| Kabete                                    | N/A  | N/A  | 650  | 650  |   |           |
| Ndumberi                                  | N/A  | N/A  | 2300   |  |   |           |
| Kiambaa                                   | N/A  | 1700   |  | 3547   |   |           |
| Kiganjo                                   | 3000   | N/A  |  |  |   |           |
| Hexagon Self Help Group                   | 230  | N/A  |  |  |   |           |
| MIK                                       | 4000   | 2,000  | 2,110  | 2110   | 11054   | Nyeri     |
| Othaya Dairy                              | 2000   | 2000   | 1797   | 1796   |   |           |
| Ihururu Dairy Farmers                     | 1200   | 1230   | 1176   | 2812   |   |           |
| Wakulima                                  | 9000   | 7000   | 7001   | 7001   |   |           |
| Tetu Dairy                                | 8090   | 700  | 787  | 787  |   |           |
| Kirichu Coop                              | N/A  | 350  | 351  | 858  |   |           |
| New Tetu                                  | N/A  | 1,230  | 1,306  | 1856   |   |           |
| Ngukurani Farmers                         | 256  | 700  | 765  | 769  |   |           |
| Gakindu Dairy                             | 500  | 700  | 1097   | 1097   |   |           |
| Island                                    | 313  | N/A  | N/A  | N/A  |   |           |
| Ainabkoi                                  | 616  | 820  | 1098   | 825  | 11354   | Lessos    |
| Cheptiret                                 | N/A  | 654  | 2000   | 760  |   |           |
| Kipchamoo                                 | 800  | 820  | 1218   | 1101   |   |           |
| Kipsamoo                                  | 2000   | 2000   | 2000   | 1976   |   |           |
| Emgwen                                    | 15   | N/A  |  |  |   |           |
| Kamno                                     | 143  | 615  | 700  | 1439   |   |           |
| Singalo                                   | N/A  | 460  | 2000   | 597  |   |           |
| Lelwak                                    | 200  | 310  | 500  | 313  |   |           |

|                       |      |      |      |      |       |          |
|-----------------------|------|------|------|------|-------|----------|
| Ligwai/Bidii          | N/A  | 913  | 1000 | 976  |       |          |
| Baitany/Tinderet      | N/A  | 3520 | 4000 | 4665 |       |          |
| Kaptumo               | N/A  | 241  | 269  | 269  |       |          |
| Moiben                | N/A  | 822  | 600  | 485  |       |          |
| Progressive           | N/A  | 420  | 1500 | 433  |       |          |
| Tuiyo                 | N/A  | 210  | 1200 | 278  |       |          |
| Megun Gaa             | N/A  | N/A  | 1000 | 252  |       |          |
| Angwan                | N/A  | N/A  | 500  | 91   |       |          |
| Onesmus               | N/A  | N/A  | 4895 | 4895 |       |          |
| Timborua              | N/A  | 165  | 600  | 197  |       |          |
| Iten                  | N/A  | 54   | 500  | 126  |       |          |
| Sugoi                 | N/A  | 435  | 1000 | 486  |       |          |
| Baharini              | N/A  | 200  |      |      |       |          |
| New Nginda            | 800  | 1700 | 1700 | 2630 | 15475 | Gatanga  |
| Thakumi               | 550  | 1100 | 1600 | 1623 |       |          |
| Umoja                 | N/A  | 800  | 1386 | 1631 |       |          |
| Boyo                  | 1070 | 1600 | 1600 | 1600 |       |          |
| Kahuro                | N/A  | 750  | 1000 | 1100 |       |          |
| Wanjengi              | 400  | 850  | 920  | 920  |       |          |
| Ichichi               | 800  | 320  | 350  | 356  |       |          |
| Abedare East SHG      | N/A  | 520  |      | NA   |       |          |
| kagaki                |      |      | 400  | 400  |       |          |
| samuka                |      |      | 1000 | 1050 |       |          |
| Kirere                | 1500 | 3500 |      | NA   |       |          |
| Sagawa                | N/A  | 320  |      | NA   |       |          |
| Kikama                | N/A  | 1560 | 4000 | 4000 |       |          |
| Gika FSCS             | 1056 | N/A  |      | NA   |       |          |
| Sakuma DSHG           | 980  | N/A  |      | NA   |       |          |
| Mugi Elite Dairy      | 147  | N/A  |      | NA   |       |          |
| Kagundu-ini-farmers   | 18   | N/A  |      | NA   |       |          |
| Gaturi Kamacharia FCS | 600  | N/A  |      | NA   |       |          |
| Magomano DFCS         | 250  | N/A  |      | NA   |       |          |
| Kitiri                | 450  | 1050 | 1260 | 1621 | 15095 | Kinangop |
| Tulaga                | 2800 | 1846 | 1708 | 1718 |       |          |
| Dairymen              | 400  | 270  | 153  | 158  |       |          |
| Mununga Kianda        | N/A  | 230  |      |      |       |          |

|                  |      |      |      |      |       |             |
|------------------|------|------|------|------|-------|-------------|
| Miharati         | 1350 | 410  | 578  | 649  |       |             |
| Wanjohi          | 470  | 310  | 310  | 432  |       |             |
| Gikara           | N/A  | 200  |      |      |       |             |
| Karati           | N/A  | 200  | 280  | 325  |       |             |
| South Kinangop   | N/A  | 120  | 270  | 289  |       |             |
| Lari             | 250  | 185  | 87   | 87   |       |             |
| Gatamaiyu        | 2900 | 2100 | 2195 | 2161 |       |             |
| Kamahia          | 1970 | 514  | 160  | 160  |       |             |
| Olaragwai        | N/A  | 98   |      |      |       |             |
| Muki             |      |      | 3829 | 4263 |       |             |
| Kiriita FCS      | 3050 | N/A  |      |      |       |             |
| Nyambini FCS     | 260  | N/A  |      |      |       |             |
| Njoro            | 202  | 222  | 519  | 760  | 6920  | Nakuru      |
| Mumberes         | N/A  | 674  | 1224 | 1224 |       |             |
| Kiplombe         | 978  | 450  | 1436 | 1436 |       |             |
| Mogotio          | 400  | 765  | 1026 | 1026 |       |             |
| kiptoim          | 300  | 450  | 894  | 992  |       |             |
| Suka             | 360  | 500  | 702  | 720  |       |             |
| Sabatia          | 2400 | N/A  |      | 0    |       |             |
| Molo             | 100  | 60   | 777  | 777  |       |             |
| Ngorika          | 390  | 180  | 618  | 816  |       |             |
| Molele           | N/A  | 45   |      | 48   |       |             |
| Mauche           | N/A  | 150  |      |      |       |             |
| Mutungati FCS    | 370  | N/A  |      |      |       |             |
| Torongo          |      |      | 2443 | 2443 |       |             |
| Sigoro           |      |      | 446  | 470  |       |             |
| Tuongane         |      |      | 684  | 798  |       |             |
| Ngarua           |      |      | 668  | 766  |       |             |
| Marmanet         |      |      | 468  | 790  |       |             |
| Tukame           |      |      | 496  | 698  |       |             |
| Boiman           |      |      | 352  | 410  |       |             |
| Kinamba          |      |      | 193  | 193  |       |             |
| Tulwobmoi        | 40   | N/A  |      |      | 10582 | Trans Nzoia |
| Tongaren         | 400  | 307  | 2949 | 2708 |       |             |
| Bamwai           | N/A  | 114  | 118  |      |       |             |
| Wamuini milk bar | 55   | 112  | 281  | 475  |       |             |
| Taito            | N/A  | 619  | 1028 | 1173 |       |             |
| Tarakwa          | 57   | 330  | 666  | 681  |       |             |



|                     |               |               |                |      |               |         |
|---------------------|---------------|---------------|----------------|------|---------------|---------|
| Meeboot             | 46            | 245           | 552            | 588  |               |         |
| Surungai            | 32            | 106           | 155            | 278  |               |         |
| Seum                | 40            | 95            | 105            | 112  |               |         |
| Naitiri             | 120           | 880           | 1081           | 1455 |               |         |
| Koitogos            | N/A           | 89            | 350            | 473  |               |         |
| Kipsombe            | N/A           | 296           |                |      |               |         |
| Cherangany          | N/A           | 1,967         | 2,355          | 3750 |               |         |
| Moi' Bridge         | 6000          | 2,300         | 2,315          | 2365 |               |         |
| Marakwet            | NA            | 3350          | 6167           | 6185 |               |         |
| Teachers            | N/A           | 1,500         |                |      |               |         |
| Ruskebei            | N/A           | 24            | 1893           | 500  | 10998         | Kericho |
| Sotik Umoja         | N/A           | 1000          | 989            | 1002 |               |         |
| Kabianga            | 176           | 307           | 2108           | 3000 |               |         |
| Sotik Dairy Farmers | 162           | 127           | 269            |      |               |         |
| Tenwek              | 287           | 212           | 502            | 1200 |               |         |
| Mogogosiek          | 24            | 138           | 799            |      |               |         |
| Ketengeret FCS      | 176           | N/A           |                |      |               |         |
| Sosiot FCS          | 50            | N/A           |                |      |               |         |
| Mutarakwa farmers   | 20            | N/A           |                |      |               |         |
| Kipangenge FCS      | 200           | N/A           |                |      |               |         |
| Longisa FCS         | 53            | N/A           |                |      |               |         |
| Chemosu Dairies     | 28            | N/A           |                |      |               |         |
| Chesilyot SHG       | 32            | N/A           |                |      |               |         |
| Gelegele FCS        | 66            | N/A           |                |      |               |         |
| Mosop FCS           | 1500          | N/A           | 2185           | 1500 |               |         |
| Londiani FCS        | 63            | N/A           |                |      |               |         |
| Cheborgei FCS       | 1500          | N/A           |                |      |               |         |
| <b>Total</b>        | <b>79,830</b> | <b>75,436</b> | <b>115,216</b> |      | <b>85,721</b> |         |

**U.S. Agency for International Development**

USAID/Kenya Mission

C/O American Embassy

UN Avenue, Gigiri

Nairobi, Kenya

Tel: +254-20-862 2000

Fax: +254-20-862 2680 / 2681 / 2682

[www.usaid.gov/ke](http://www.usaid.gov/ke)